Kodak DryView
8900 Laser Imager
User Guide

Eastman Kodak Company
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Rochester, NY 14650

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Glossary

1 Safety and Related Information

Safety, Warnings, and Cautions

Please read and understand all instructions before using this product.

RISK OF ELECTRIC SHOCK:

This equipment is operated with hazardous voltage which can shock, burn or cause death.

- Remove wall plug before servicing equipment. Never pull on cord to remove from outlet. Grasp plug and pull to disconnect. Only perform maintenance that is described in this User Guide. Do not attempt to service or repair the laser imager yourself to avoid exposure to dangerous voltage, laser beam, or other danger. Always call an Authorized Service Provider of Kodak products for any service or repair.
- Do not operate equipment with a damaged power cord.
- Do not use an extension cord to power this equipment.
- Do not operate equipment with any of the safety interlocks overridden.
- Position the power cord so it will not be tripped over or pulled.
- Connect this equipment to a grounded wall outlet.

***WARNING*:**

This equipment contains moving parts that may be accessible to the user. Loose clothing, jewelry or long hair may cause personal injury or damage to the equipment.

- Do not operate equipment with the covers open.
- Do not operate equipment with any of the safety interlocks overridden.

WARNING:
This equipment is not contained in a sealed cabinet. Do not use this equipment in locations where it can come in contact with liquids, including body fluids.

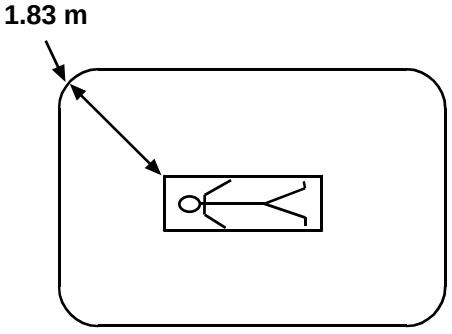
CAUTION:
Do not use a cell phone within 2 meters of a laser imager. This proximity includes any imager behind a wall adjacent to your location.

CAUTION:
Do not use a microwave oven within 4 meters of a laser imager. Electromagnetic radiation from a microwave oven is only an issue if after the oven door is closed and latched, the seal does not maintain an electromagnetic tight fit between the oven door and oven main housing. Determining if the seal has an electromagnetic tight fit requires special detection equipment.

CAUTION:
Do not use in the presence of flammable anesthetics, oxygen, or nitrous oxide. This equipment does not have a gas-sealed electronics enclosure and could ignite any flammable or explosive gases present in its environment.

CAUTION:

This equipment is intended to connect to other medical devices. Only an Authorized Service Provider of Kodak products may perform installation and service maintenance. This device is NOT to be located within the patient environment. Therefore, the equipment must not be located closer than 1.83 meters from a patient bed or chair.



CAUTION:

This device should not be used in close contact with MRI devices, due to possible very high magnetic fields near an MRI unit. For magnetic field specifications, see "Operating Environment" on page 5-3.

CAUTION:

Do not substitute or modify any part of this equipment without prior written approval of Eastman Kodak Company.

CAUTION:

Federal law prohibits dispensing without a prescription.

CAUTION:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide

reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the User Guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION:

Do not use isopropyl alcohol to clean the exterior surfaces of the laser imager. Isopropyl alcohol can dissolve the exterior paint on the laser imager.

CAUTION:

Filters are considered to be non-hazardous waste according to the US Environmental Protection Agency Resource Conservation Recovery Act (RCRA). You may dispose of filters in a landfill or incinerator with energy recovery in a municipal, commercial or industrial facility. Contact your state or local government to determine if additional disposal requirements apply.

CAUTION:

Lithium batteries should only be replaced by an Authorized Service Provider of Kodak products. The laser imager uses a lithium battery to power the clock and calendar circuitry. THERE IS A DANGER OF EXPLOSION IF THE BATTERY IS REPLACED INCORRECTLY. The battery must be replaced only with the same or equivalent type recommended by Motorola Inc. The US EPA's RCRA does not regulate disposal of this lithium battery. Users should discard spent batteries in municipal trash unless their community offers a battery collection program.

CAUTION:

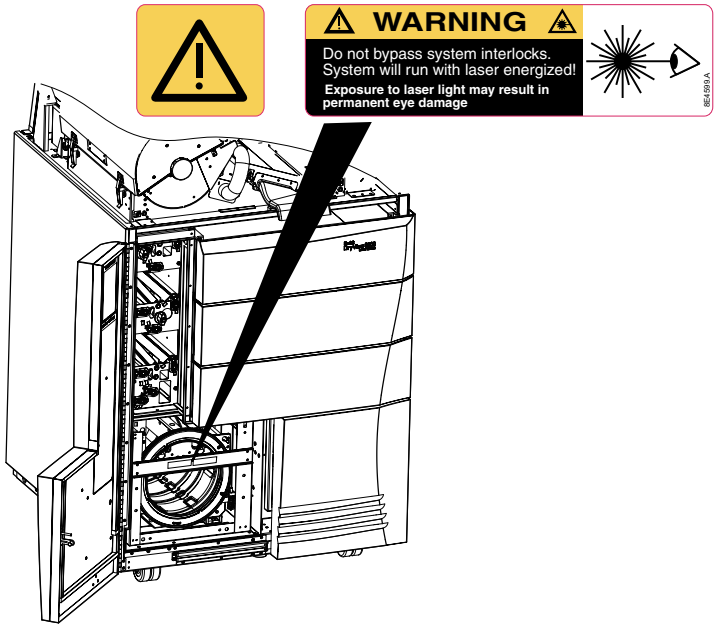
This product contains lead and mercury. The lead is located in the solder on the circuit boards. Mercury is located in the back light of the local panel. Disposal of components containing these materials may be regulated due to environmental considerations. For disposal or recycling information at the end of usable service, please contact your local authorities or visit the Electronics Industry Alliance Web site at: http://www.eiae.org.

LASER WARNING:

The equipment uses a 100-milliwatt invisible laser. Laser radiation may be present when the machine operates without the rear cover installed. Covers with this label may only be removed by an Authorized Service Provider of Kodak products. USE OF CONTROLS OR ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN EYE DAMAGE.

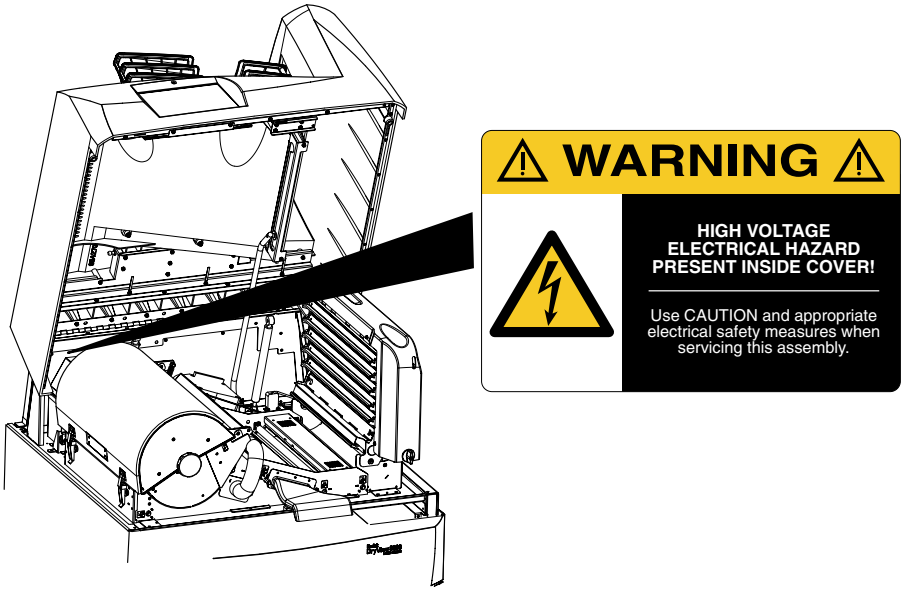
Safety Labels

Safety labels are attached to the laser imager in compliance with international standards.


WARNING
Do not bypass system interlocks.
System will run with laser energized!
Exposure to laser light may result in permanent eye damage
5E4591A

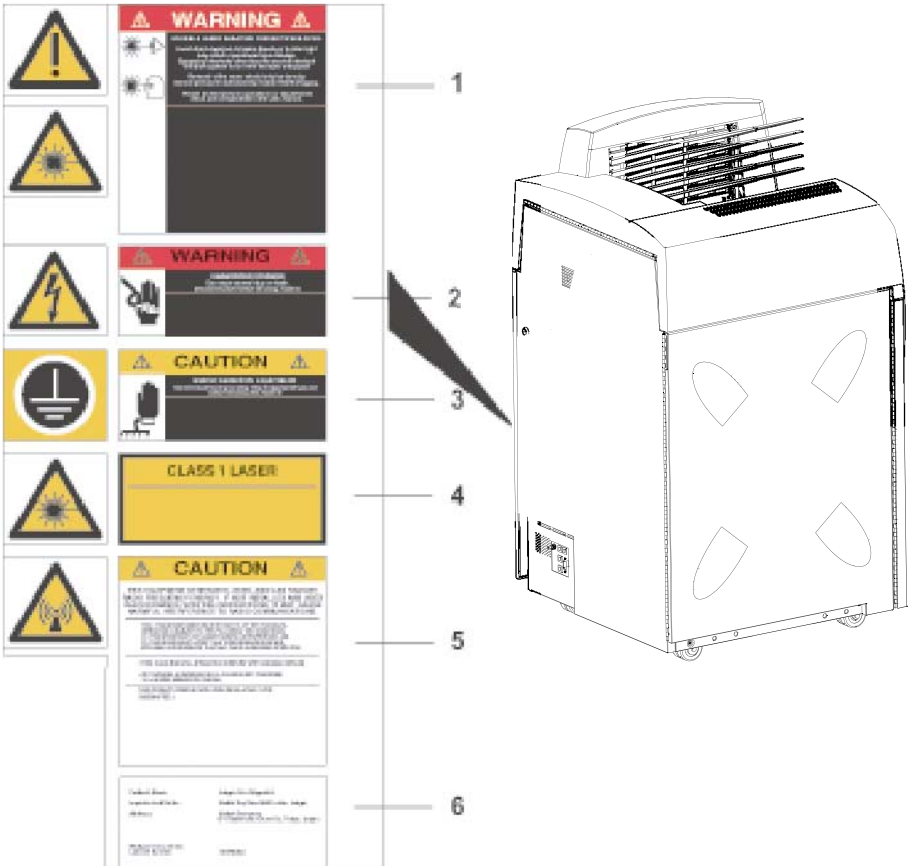
Laser Radiation Warning Labels

Laser Interlock. This warning label indicates that laser energy is present. Defeating interlocks allows the laser imager to run with the laser energized. AVOID DIRECT EXPOSURE TO THE LASER BEAM. EXPOSURE TO LASER ENERGY MAY RESULT IN PERMANENT EYE DAMAGE.



High Voltage Warning Label

This warning label indicates that high voltage is present under panels or enclosures where labels are attached. These panels may only be removed by an Authorized Service Provider of Kodak products.



Warning and Caution Labels

1 **Invisible Laser Radiation Present When Open.** This warning label indicates that invisible laser radiation is present under panels where labels are attached. These panels may only be removed by an Authorized Service Provider of Kodak products. AVOID DIRECT EXPOSURE TO THE LASER BEAM. EXPOSURE TO LASER ENERGY MAY RESULT IN PERMANENT EYE DAMAGE. DEFEATING INTERLOCKS ALLOWS THE LASER IMAGER TO RUN WITH THE LASER ENERGIZED.

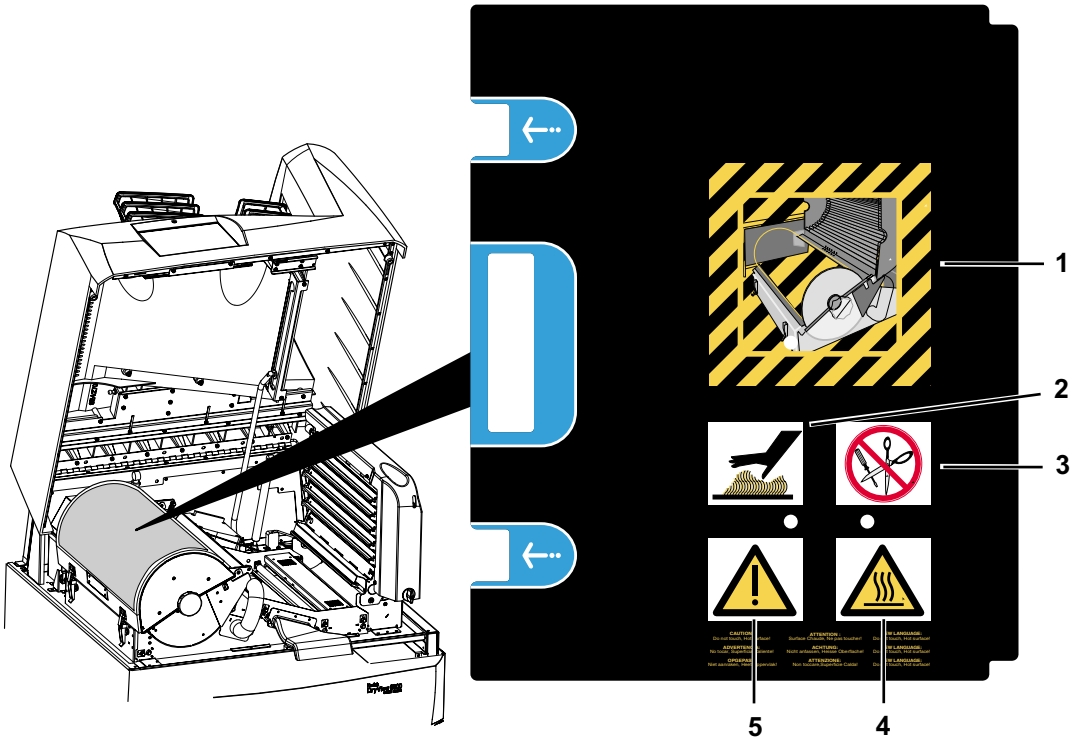
2 **Hazardous Voltage.** This warning label indicates that high voltage is present under panels where the label is attached. Only an Authorized Service Provider of Kodak products should attempt access.

3 **Static Sensitive Equipment.** This label identifies static-sensitive components. Connect a personal grounding strap to appropriate ground before servicing this laser imager. These panels may only be removed by an Authorized Service Provider of Kodak products.

4 **Class 1 Laser.** This label indicates that the laser imager complies with IEC requirements for Class 1 systems.

5 **Radio Frequency Energy.** This label indicates that the laser imager can radiate radio frequency energy. If not installed and used in accordance with the instructions, the laser imager may cause harmful interference to radio communications.

6 **Manufacturer Identification.** This label indicates the product name, manufacturer's name, importer's name, and license number.



Processor Drum Cover Label

1 **Processor drum cover pictogram.** This pictogram illustrates the processor drum cover open. When open, take caution to avoid heat and use of sharp objects.

2 **Caution - hot surface pictogram.** This pictogram advises to use care near the processor drum to avoid possible burns.

3 **Caution - no sharp objects pictogram.** This pictogram advises to avoid using sharp objects near the processor drum.

4 **ISO label.** This warning label advises to use care near the processor drum to avoid possible burns.

5 **ISO label.** This label identifies a possible warning or caution and indicates applicable information in the User Guide.

Safety and Health Compliance

This equipment has been tested for and complies with the following Safety and Emissions Standards. Certificates of Compliance and Declarations of Conformity have been issued as shown below.

Safety

United States

21 CFR 900.12(e) Mammography Quality Standards Act; Quality Standards; Quality Assurance for Equipment.

21 CFR 1040.10 Class I

Code of Federal Regulations Title 21 Food and Drugs

Chapter I Food and Drug Administration, Department of Health and Human Services

Volume 8 - Parts 800 to 1299

Subchapter J - Radiology Health

Part 1040 - Performance Standards for Light Emitting Products

Section 10 - Laser Products

FDA 21CFR 807 Premarket Notification 510(K): Regulatory Requirements For Medical Devices.

UL 60950-1: Safety of Information Technology Equipment, including Electrical Business Equipment (Bi-National Standard).

IEC 60601-1-1: Medical electrical equipment - Part 1: General requirements for safety - Section 1: Collateral standard: Safety requirements for medical electrical systems, Clause 19.

IEC 60825-1: Safety of laser products - Part 1 : Equipment classification, requirements and user's guide.

Canada

CAN/CSA - C22.2 NO 60950-1-03 Information Technology Equipment - Safety - Part 1: General Requirements. (Bi-National Standard, with UL 60950-1).

IEC 60601-1-1: Medical electrical equipment - Part 1: General requirements for safety - Section 1: Collateral standard: Safety requirements for medical electrical systems, Clause 19.

IEC 60825-1: Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

Europe

EN60950-1: Safety of Information Technology Equipment, including Electrical Business Equipment (IEC 60950: 1991, Modified) (Includes Amendment A1, A2, A3, A4, and A11).

EN60601-1-1: Medical electrical equipment - Part 1: General requirements for safety - Section 1: Collateral standard: Safety requirements for medical electrical systems, Clause 19.

EN60825-1: Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

Rest of World

IEC 60950-1: Safety of information technology equipment.

IEC 60601-1-1: Medical electrical equipment - Part 1: General requirements for safety - Section 1: Collateral standard: Safety requirements for medical electrical systems.

IEC 60825-1: Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

EMC

United States

FCC Rules and Regulations, Title 47, Part 15, Subpart B, Class A: Radio Frequency Devices: Unintentional Radiators.

This equipment has been tested and been found to comply with the limits for a Class A digital device pursuant to part 15 of the FCC rules. Those limits are designed to provide reasonable protection against harmful interference in a residential installation.

FCC Rules and Regulations, Title 47, Part 15, Subpart C, Radio Frequency Devices: Intentional Radiators. "FCC ID: PA 48E1587"

Canada

CAN/CSA-C108.6-M91, Class A: Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment.

Intentional Radiation "IC: 1016B8E1587"

This Class A digital apparatus complies with Canadian ICES-003.

CET APPAREIL NUM ENRIQUE DE CLASSE A EST CONFORME A LA NORME NMB-003 DU CANADA.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Europe and the Rest of World

Guidance and Manufacturer's Declaration for Electromagnetic Emissions		
The *Kodak DryView* 8900 Laser Imager is intended for use in the electromagnetic environment specified below. The customer or user of the *Kodak DryView* 8900 Laser Imager should assure that it is used in such an environment.		
Emissions Test	**Compliance**	**Electromagnetic Environment - Guidance**
RF emissions: • EN55011 • CISPR 11	Group 1	The *Kodak DryView* 8900 Laser Imager uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions: • EN55011 • CISPR 11	Class A	The *Kodak DryView* 8900 Laser Imager is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonics emissions: • EN61000-3-2 • IEC 61000-3-2	Class A	The *Kodak DryView* 8900 Laser Imager is suitable for use everywhere, including those establishments directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations and flicker emissions: • EN61000-3-3 • IEC 61000-3-3	Complies	The *Kodak DryView* 8900 Laser Imager is suitable for use everywhere, including those establishments directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

Guidance and Manufacturer's Declaration for Electromagnetic Immunity			
The *Kodak DryView* 8900 Laser Imager is intended for use in the electromagnetic environment specified below. The customer or user of the laser imager should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment - Guidance**
Electrostatic discharge (ESD): • EN61000-4-2 • IEC 61000-4-2	± 6 kV contact ±8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst: • EN61000-4-4 • IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge: • EN61000-4-5 • IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	± 1 kV differential mode ± 2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply lines: • EN61000-4-11 • IEC 61000-4-11	<5% U_τ* (>95% dip in U_τ*) for 0.5 cycle 40% U_τ* (60% dip in U_τ*) for 5 cycles 70% U_τ* (30% dip in U_τ*) for 25 cycles <5% U_τ* (>95% dip in U_τ*) for 5 sec.	<5% U_τ* (>95% dip in U_τ*) for 0.5 cycle 40% U_τ* (60% dip in U_τ*) for 5 cycles 70% U_τ* (30% dip in U_τ*) for 25 cycles <5% U_τ* (>95% dip in U_τ*) for 5 sec.	Mains power quality should be that of a typical commercial or hospital environment. If the user of the *Kodak DryView* 8900 Laser Imager requires continued operation during power mains interruptions, it is recommended that the *Kodak DryView* 8900 Laser Imager be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field: • EN61000-4-8 • IEC 61000-4-8	3 A/m	3 A/m	Mains power quality should be that of a typical commercial or hospital environment.
NOTE: * U_τ is the a.c. mains voltage prior to application of the test level.			

Guidance and Manufacturer's Declaration for Electromagnetic Immunity

The *Kodak DryView 8900* Laser Imager is intended for use in the electromagnetic environment specified below. The customer or user of the *Kodak DryView* 8900 Laser Imager should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
			Portable and mobile RF communications equipment should be used no closer to any part of the *Kodak DryView* 8900 Laser Imager, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended Separation Distance:**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	$d = 1.17\sqrt{P}$
Radiated RF IEC 61000-4-3	3 v/m 80 MHz to 2.5 GHz	3 v/m	$d = 1.17\sqrt{P}$ 80 MHz to 800 MHz $d = 2.33\sqrt{P}$ 800 MHz to 2.5 GHz *d* is the recommended separation distance in meters (m). *P* is the maximum output rating of the transmitter in watts (W) according to the transmitter manufacturer. Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey [a], should be less than the compliance level in each frequency range [b]. Interference may occur in the vicinity of equipment marked with the following symbol:

NOTE:

- At 80 MHz and 800 MHz, the higher frequency range applies.
- These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[a] See Note 1 on next page.
[b] See Note 2 on next page.

Guidance and Manufacturer's Declaration for Electromagnetic Immunity	
Note 1	Field strengths from fixed transmitters, such as base station for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the *Kodak DryView* 8900 Laser Imager is used exceeds the applicable RF compliance level above, the *Kodak DryView* 8900 Laser Imager should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the *Kodak DryView* 8900 Laser Imager.
Note 2	Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 v/m.

Recommended separation distance between portable and mobile RF communications equipment and the *Kodak DryView* 8900 Laser Imager

The *Kodak DryView* 8900 Laser Imager is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the *Kodak DryView* 8900 Laser Imager can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and the *Kodak DryView* 8900 Laser Imager as recommended below, according to the maximum output of the communications equipment.

Rated maximum output power of transmitter (*P*) in Watts (W)	**Separation distance (*d*) according to frequency of transmitter in meters (m)**		
	150 kHz to 80 MHz $d = 1.17\sqrt{P}$	80 MHz to 800 MHz $d = 1.17\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.33\sqrt{P}$
0.01			
0.1			
1			
10			
100			

Recommended separation distance between portable and mobile RF communications equipment and the *Kodak DryView* 8900 Laser Imager
For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

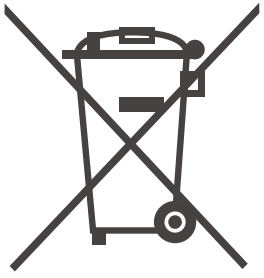
EU Directives

93/42/EEC Title: Council Directive Concerning Medical Devices.

99/05/EEC Title: Council Directive Concerning Radio and Telecommunications Terminal Equipment.

73/23/EEC Title: Council Directive on the Harmonization of the Laws of Member States Relating to Electrical Equipment Designed for Use within Certain Voltage Limits.

89/336/EEC Title: Council Directive on the Approximation of the Laws of the Member States Relating to Electromagnetic Compatibility.



Recycling Label

In the European Union, this symbol indicates that when the last user wishes to discard this product, it must be sent to appropriate facilities for recovery and recycling. Contact your local Kodak representative or refer to www.kodak.com/go/recycle for additional information on the collection and recovery programs available for this product.

CE Marking

Documents concerning the conformance of this product to Council Directive 93/42/EEC of 14 June 1993 concerning Medical Devices can be obtained from the Eastman Kodak Company, Health Imaging Group European Representative at:

Kodak GmbH
Product Safety
70323 Stuttgart
Germany
Phone: ++49 711 406 2993
Fax: ++49 711 406 3513

User Guide Conventions

The following special messages emphasize information or indicate potential risks to personnel or equipment.

NOTE: Notes provide additional information, such as expanded explanations, hints, or reminders.

IMPORTANT: *Important notes highlight critical policy information that affects how you use this guide and this product.*

CAUTION:
Cautions point out procedures that you must follow precisely to avoid damage to the system or any of its components, loss of data, or corruption of files in software applications.

***WARNING*:**
Warnings identify procedures that you must follow precisely to avoid injury to yourself or others.

LASER WARNING:
Laser warnings warn personnel that access to laser radiation is possible and all personnel must avoid direct exposure to the beam.

Please Note

The information contained herein is based on the experience and knowledge relating to the subject matter gained by Eastman Kodak Company prior to publication. No patent license is granted by this information. Eastman Kodak Company reserves the right to change this information without notice and makes no warranty, express or implied, with respect to this information. Kodak shall not be liable for any loss or damage, including consequential or special damages, resulting from the use of this information, even if loss or damage is caused by Kodak's negligence or other fault.

2 Overview

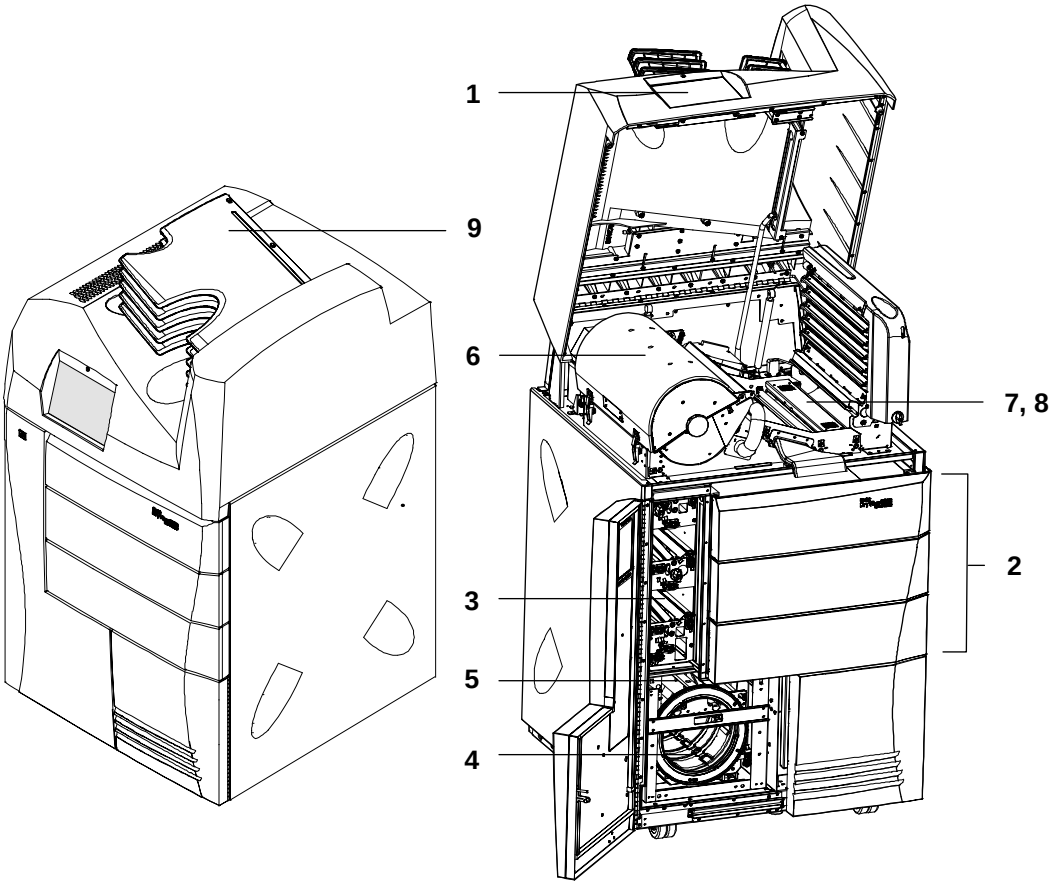
8900 Laser Imager

The *Kodak DryView* 8900 Laser Imager is a continuous-tone laser imager with an internal photothermographic film processor. Heat, rather than photo chemicals, is used to develop the film. The laser imager receives the digital image data through a DICOM medical imaging protocol.

The laser imager prints images on *DryView* Laser Imaging Film which is packed in 125-sheet cartridges. You can load three cartridges into the laser imager simultaneously. The laser imager can accept blue or clear base film in any of the following sizes:

- 20 x 25 cm (8 x 10 in.) *DryView* Laser Imaging Film
- 20 x 25 cm (8 x 10 in.) *DryView* Mammography Laser Imaging Film
- 25 x 30 cm (10 x 12 in.) *DryView* Laser Imaging Film
- 25 x 30 cm (10 x 12 in.) *DryView* Mammography Laser Imaging Film
- 28 x 35 cm (11 x 14 in.) *DryView* Laser Imaging Film
- 35 x 35 cm (14 x 14 in.) *DryView* Laser Imaging Film
- 35 x 43 cm (14 x 17 in.) *DryView* Laser Imaging Film

System Components



System Components

1 **Touch screen local panel**. The local panel is your interface to the laser imager. The panel accepts your commands and gives you status information about imager functions.

2 **Film drawers.** Your imager may be configured for one, two, or three film drawers. Each film drawer can hold any of five different sizes of *DryView* Laser Imaging Film. You can select the film cartridge in any drawer for printing.

3 **Film transport**. The film transport moves the film through the laser imager.

4 **Film platen**. The film platen positions the film and holds the film stationary for imaging.

5 **Optics module**. The optics module writes (exposes) the image onto the film while the film is positioned on the film platen.

6 **Film processor**. The film processor uses heat to develop the image exposed onto the film by the laser in the optics module.

7 **Densitometer**. The densitometer receives the film after it passes through the processor and performs a density check to confirm image quality. The densitometer is the key component of the Automatic Image Quality Control (AIQC) system.

8 **AIQC**. The AIQC system ensures that contrast, density, and other image-quality parameters meet preset user preferences.

9 **Film sorter**. Your imager may be configured without a sorter. The film sorter receives the processed film after the film passes through the densitometer and transports the film to the selected film bin on top of the laser imager. The bottom bin holds 125 sheets of film. Each of the top five bins holds 30 sheets of film.

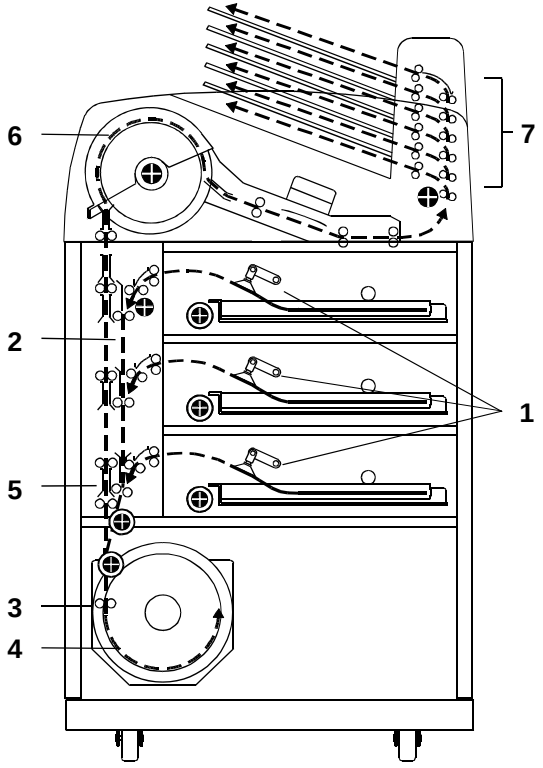
How the Laser Imager Works

When the laser imager receives a print request and image data from the modality (image capturing device), the system determines the requested film size from the information included with the image data. The system then selects the appropriate film cartridge.

Each time a modality sends the imager a print request, the following print sequence occurs.

1. Suction cups in the pickup area lift a single sheet of film out of the supply cartridge and feed the film into the vertical transport rollers.
2. The vertical transport rollers move the film down to the film platen (exposure area).
3. The platen rollers move the film into the film platen.
4. The platen holds the film while the scanner writes the image onto the film.

5. The platen rollers move the film into the vertical transport rollers, which move the film into the film processor.
6. As the film passes over the processor drum, the heat generated by the drum develops the film.
7. If no sorter is present, the film will be placed on the top hood. If the imager is configured with a sorter, the film transport rollers move the exposed film through the densitometer to the sorter and out to one of the six bins.



Print Sequence

3 Operation and Maintenance

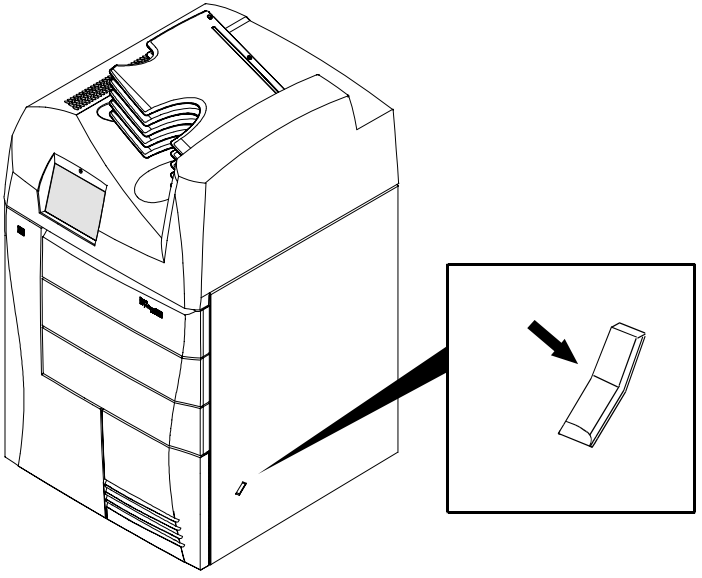
System Power Up, Shut Down, and Energy Save

Power Up

To power up the laser imager, press and hold the power switch to the ON position for about 2 seconds. The green LED above the local panel lights when the power is on.

The power up process takes approximately 3 minutes. After power up, the laser imager begins accepting and queueing print jobs. At this point, you can determine cartridge status and load new cartridges if necessary.

Film will not begin processing until the laser imager is completely warmed up (approximately 45 minutes).



Power Switch (press for two seconds)

Restart / Shut Down

Shut down the laser imager if you do not expect to use it for an extended period of time (three days or longer). To shut down or restart the laser imager:

1. Touch the **Power** icon on the local panel.

2. Touch the **Shutdown** or **Restart** button.

Energy Save

Touch the **Energy Save** button. This will manually initiate the Energy Save Mode.

To schedule the Automatic Energy Save Mode, see "Scheduling the Automatic Energy Save Mode" on page 3-35.

Levels of User Access

The laser imager has four levels of user access:

NOTE: The reprint capability of the laser imager enables Levels 2, 3, and 4 users to command reprinting of images that may contain patient-identifiable data. Therefore, operation of the system by users at these levels is controlled by a login procedure that can assist users in meeting requirements to control access to such information.

Level 1 Operator	Activities include printing, clearing of some errors, and removing film jams.
Level 2 Operator (Key Operator)	Activities include printing, clearing of some errors, removing film jams, performing minor setup, deleting, and reprinting of jobs. Access to Level 2 requires a Key Operator ID and passcode. Refer to "Key Operator Information" on page 3-24.
Level 3 First Call Service	First Call Service providers are Kodak-trained and certified self-maintenance customers. Level 3 First Call provides access to all Level 1 and 2 features and functions. In addition, First Call activities include Preventive Maintenance with the ability to reset some imaging parameters. Access to Level 3 requires a Level 3 ID and passcode.
Level 4 Full Service	Full Service providers are Kodak Health Imaging Field Engineers and Kodak Technical Support staff. Level 4 Full Service requires licensing for a specified period. Full Service providers have access to all Level 1, 2, and 3 service features. The providers can also access the laser imager through a service computer or through a remote computer connected to the network. Access to Level 4 requires a Service ID and passcode.

Power Failures

In the event of a power loss, the laser imager shuts down. To restore power, press and hold the power switch to the **ON** position for about 2 seconds.

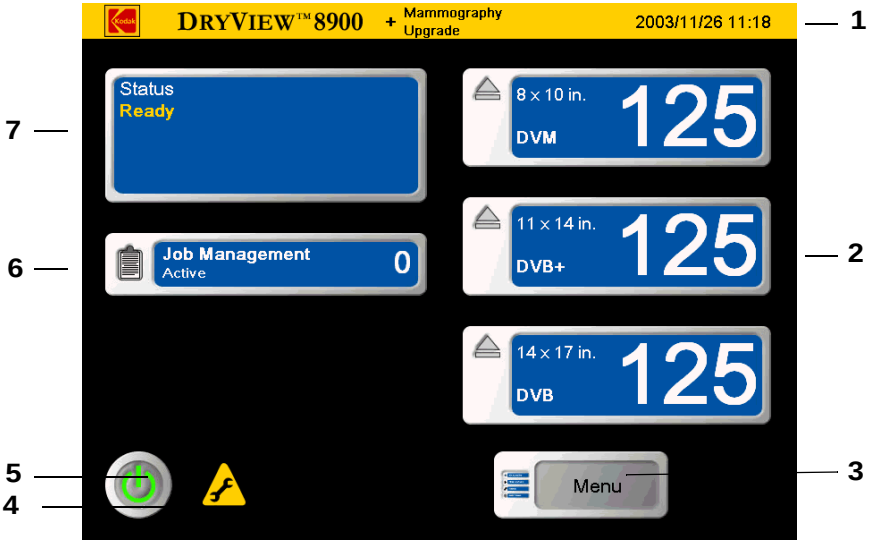
Using the Touch Screen Local Panel

The local panel provides touch-screen controls. To select a menu choice, touch the center of the button.

NOTE: Use only your finger when selecting buttons on the screen. Using hard objects, such as pens or pencils, can damage the surface of the touch screen.

Status Screen

The Status Menu is the first screen you see when the laser imager is completely powered up.



Status

1 The title bar includes **Date and Time,** and the text **Mammography Upgrade** if the mammography upgrade is installed and enabled.

2 **Film supply drawer button**. The film supply drawers are accessed from the front of the laser imager. Touch any drawer button to close the film cartridge and open the drawer. The button also provides film information related to the currently installed cartridge:

- Film size appears in the upper left corner.
- Film type appears in the lower left corner.
- Current number of film sheets available appears on the right.

3 **Main Menu button**. When touched, the local panel displays the **Main Menu** (see "Main Menu" on page 3-6).

4 **Preventive Maintenance icon**. When on, Preventive Maintenance is needed.

5 **Power button.** When touched, the local panel displays the **Power** display.

6 **Job Management**. When touched, the local panel displays the **Job Management** screen (see "Job Management Screen" on page 3-11).

7 **Status display area.** Displays system status messages.

Main Menu

Main Menu

1 **Job Management.** When touched, the local panel displays the **Job Management** screen (see "Job Management Screen" on page 3-11).

2 **Image Sources.** When touched, the local panel displays the **Image Sources** screen (see "Image Sources Screen" on page 3-13).

3 **Service**. When touched, the local panel displays the **Service** screen. The **Service** screen is only available to Level 4 Service.

4 **Status**. When touched, the local panel displays the **Status** screen (see "Status Screen" on page 3-4).

5 **Back Navigation**. When touched, the local panel displays the previously displayed screen.

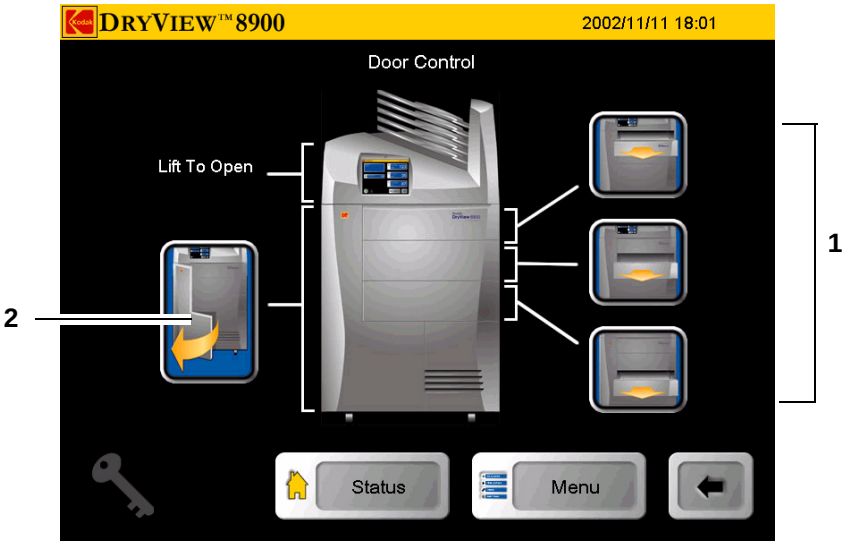
6 **Key Operator Login**. When touched, the local panel displays the **Key Operator Login** screen (see "Key Operator Passcode" on page 3-24).

7 **System Information**. When touched, the local panel displays the **System Information** screen (see "System Information Screen" on page 3-9).

8 **System Functions.** When touched, the local panel displays the **System Functions** screen (see "System Functions Screen" on page 3-8).

9 **Door Control.** When touched, the local panel displays the **Door Control** screen (see "Door Control Screen" on page 3-7).

Door Control Screen

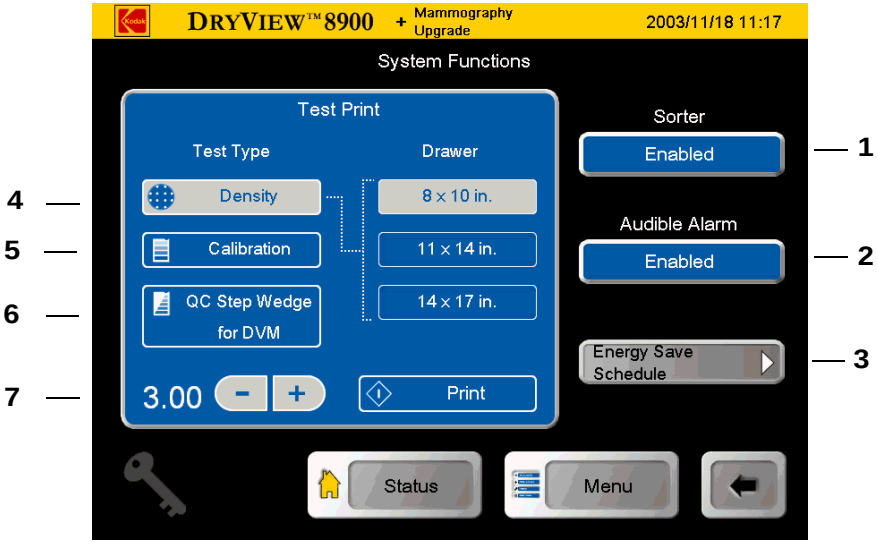


Door Control

1 **Film Drawer icons.** Your imager may be configured for one, two, or three drawers. Film drawer icons will represent that configuration. When touched, the corresponding film drawer opens (see "Opening the Film Drawers" on page 3-14).

2 **Front Door icon.** When touched, the front door opens (see "Opening the Left Front Door" on page 3-14).

System Functions Screen



System Functions

1 **Sorter (Enabled/Disabled).** If your imager is configured with no sorter, this button will be absent. When touched, the sorter is enabled or disabled. When disabled, the laser imager sends all film to bin 1.

2 **Audible Alarm (Enabled/Disabled)**. When touched, the audible alarm for error and status messages is enabled or disabled (Key Op function).

3 **Energy Save Schedule**. When touched, the **Energy Save Schedule** screen is displayed for viewing (see "Scheduling the Automatic Energy Save Mode" on page 3-35). Editing the daily periods of Energy Save Mode is a Key Op function.

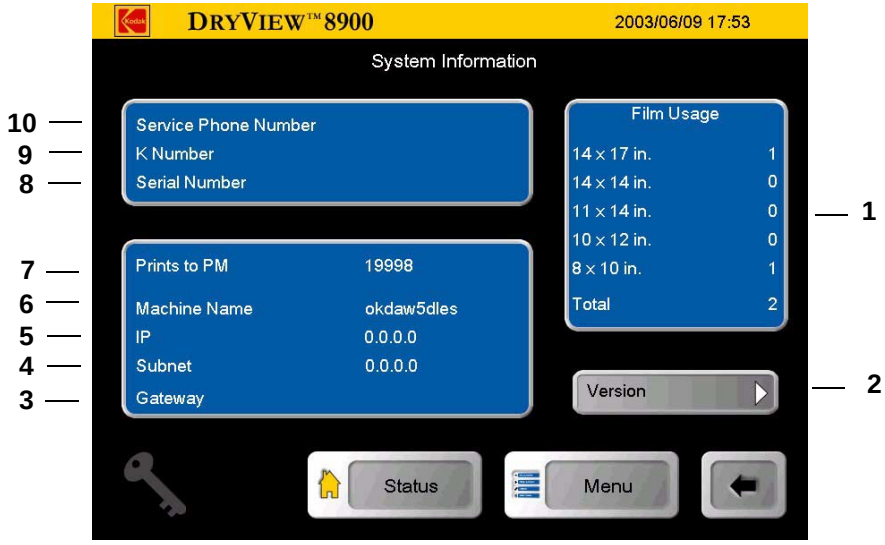
4 **Density**. When touched, Density test print is selected. When the **Print** button is touched, the laser imager prints a **Density** test print from the selected film drawer and at the selected density (default 3.00).

5 **Calibration.** When touched, Calibration test print is selected. When the **Print** button is touched, the laser imager prints a **Calibration** test print from the selected film drawer.

6 **QC Step Wedge for DVM**. This button is present only if the mammography upgrade is installed and enabled. This button prints a QC step wedge, only on DryView Mammography Film for use in daily quality control process (see "Requesting a QC Step Wedge" on page 3-20).

7 **Print.** When touched, the system prints the selected test print (**Calibration**, **Density** or **Step Wedge** test print).

System Information Screen



System Information

1 **Film Usage**. The display area provides print counts for each film size and the total number of prints.

2 **Version** of software in laser imager components. When touched, the **Version Information** screen is displayed (see "Version Information" on page 3-10).

3 The laser imager **Gateway**.

4 The laser imager **Subnet.**

5 The laser imager **IP address**.

6 The laser imager **Name**.

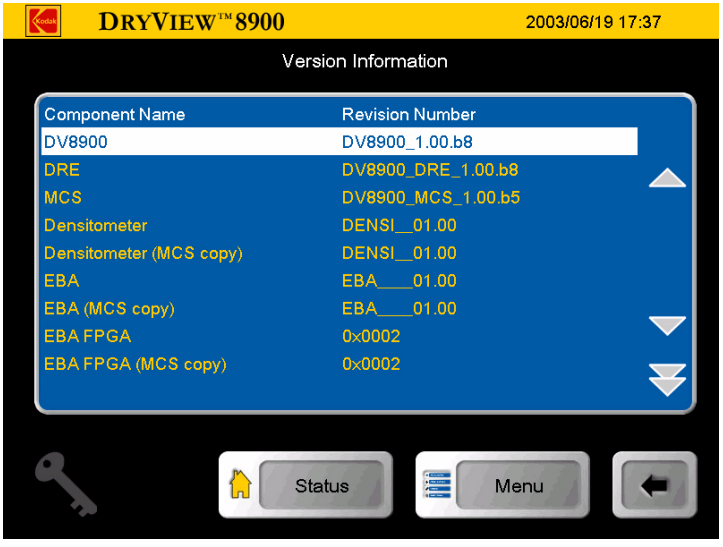
7 **Prints to PM**: The number of prints before a Preventive Maintenance is due.

8 **Serial Number**: The laser imager serial number.

9 **K Number**: The laser imager Kodak number.

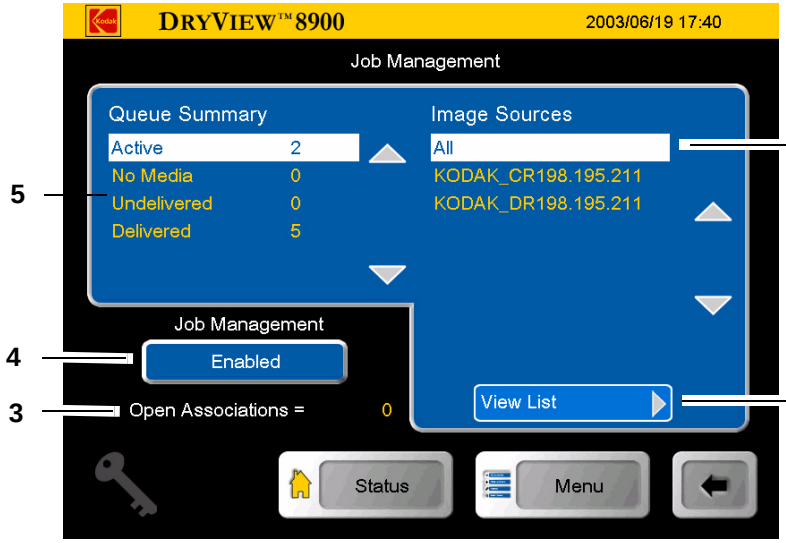
10 **Service Phone**: The Kodak Service telephone number.

Version Information



Version Information (Displays software component versions)

Job Management Screen



Job Management

1 List of modalities that have active print jobs in the queue.

2 **View List**. When touched, the **Active Queue** screen displays all print jobs currently in the queue (see "View List" on page 3-12).

3 **Open Associations**. Represents the number of modalities currently communicating actively with the laser imager.

4 When touched, the **Job Management** is enabled or disabled.

5 Identifies the number of print jobs in a queue, having one of the following statuses:

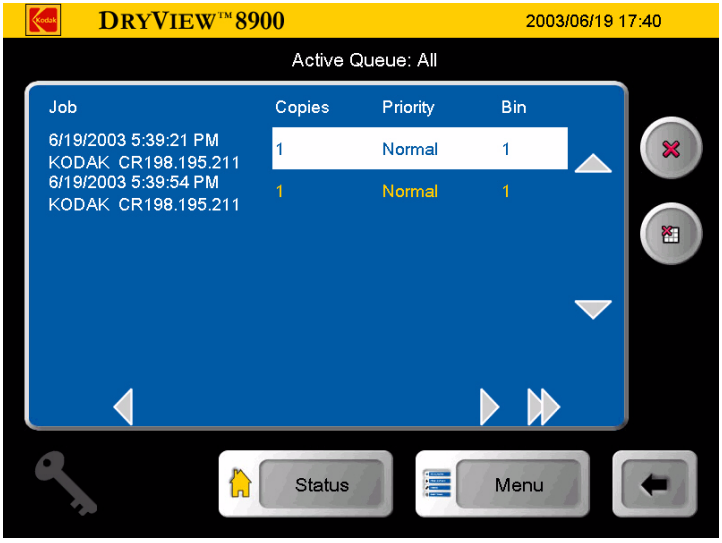
a. Active. Printing is ongoing or will start as soon as current prints move further through the laser imager.

b. No media. Lack of media caused these jobs to lose Active Status. Once the media is loaded, the jobs will be retried.

c. Undelivered. These jobs could not be printed. If this was caused by a laser imager error, clearing the error should should allow the jobs to be retried.

d. Delivered. These jobs arrived at the laser imager.

View List



Active Queue View List

Image Sources Screen

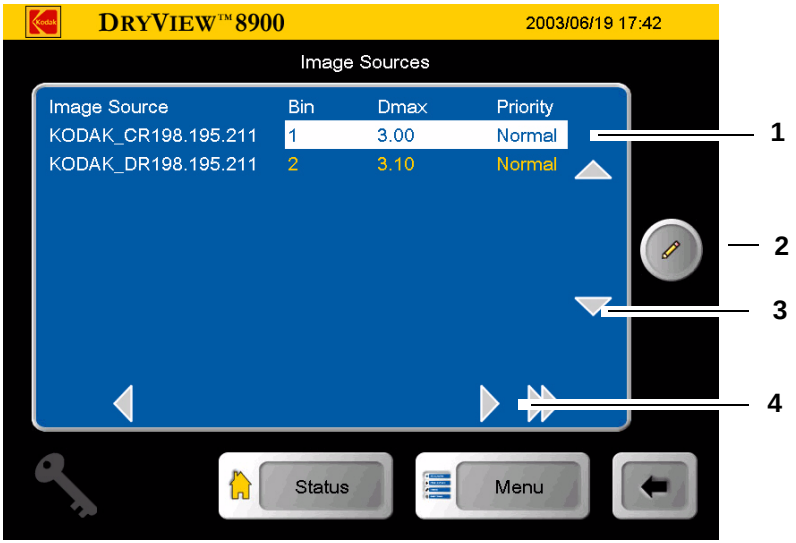


Image Sources

1 List of all modalities that have sent print jobs to the laser imager. The list identifies the sorter bin (if the imager is configured with a sorter), Dmax value, and print priority designation (Normal, Low, or Stat) with which the modality is associated. When touched, the bottom right scroll arrow scrolls to the right to reveal film border, film size, film base, and Dmin information.

2 When touched, the **Image Source Editor** screen is displayed (Key Op Function) (see "Selecting Bins" on page 3-28).

3 Scroll arrows.

4 Scroll arrows.

Operation

Opening the Left Front Door

When open, the left front door provides access to the film transport areas. Use the **Door Control** screen on the local panel to open the left front door in normal situations (see "Door Control Screen" on page 3-7). If the **Door Control screen** fails to open the door, use the manual door override latch (see "Film Drawers and Front Door Manual Override Latches" on page 3-14).

Opening the Right Front Door

The right front door is located on the lower right side of the imager and provides access to the charcoal filter, which must be changed every 20,000 film cycles (see "Installing a New Charcoal Filter" on page 3-21). To open the door pull on the lower left corner of the door.

Opening the Film Drawers

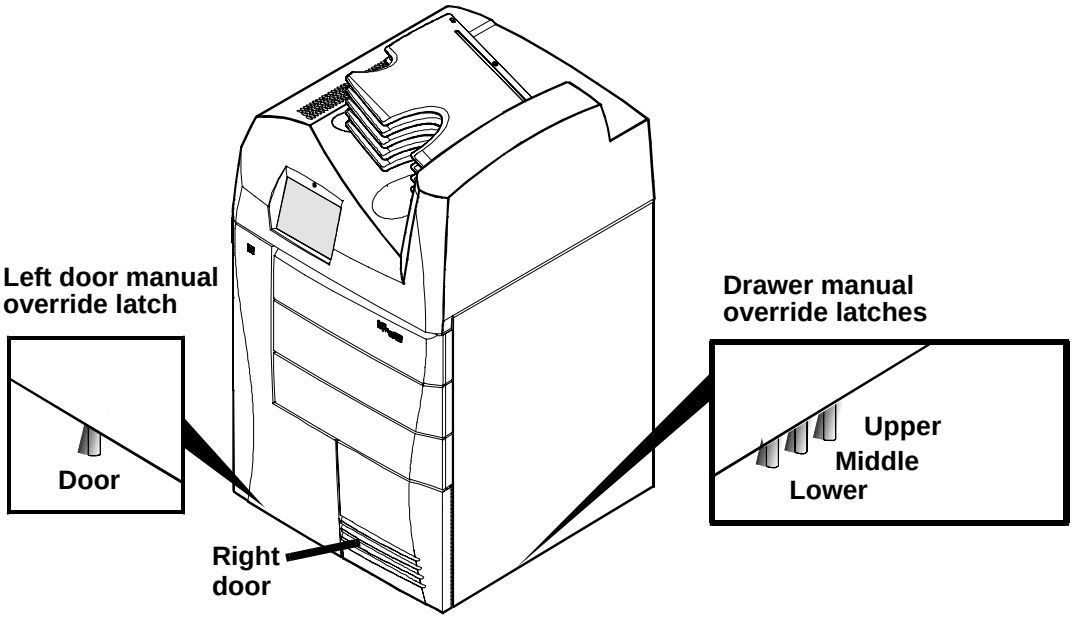
The open film drawer controls on the local panel are available on two display screens: **Door Control** screen and **Status** screen. If a film drawer fails to open, use the manual drawer override latch (see "Film Drawers and Front Door Manual Override Latches" on page 3-14).

Film Drawers and Front Door Manual Override Latches

If the laser imager is shut down or if the **Door Control** screen fails to open the drawers or door, use the manual override latches.

The door override is under the front of the imager. The drawer overrides are under the right side of the imager.

NOTE: If the drawers are opened without the film cartridge closing, several sheets of film at the top of the cartridge will be exposed (fogged) and should be discarded.



Manual Override Latches

To manually open the drawers and left front door:

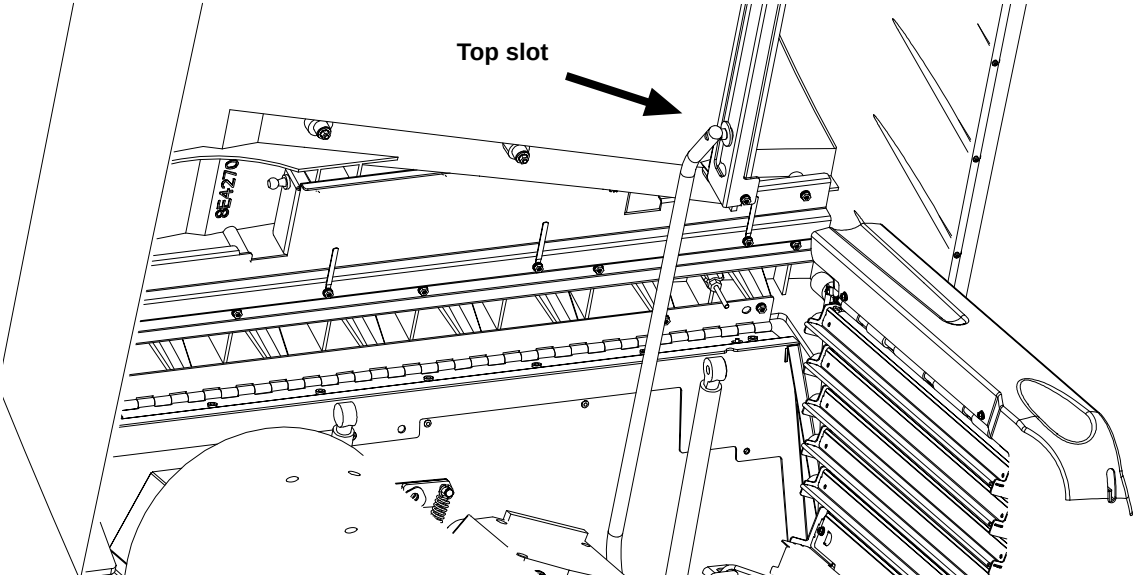
1. Minimize film exposure by making the room as dark as possible.
2. Lift the desired override latch.
3. If necessary, manually close the film cartridge to prevent the film from fogging.

Opening the Hood

Opening the hood provides access to clear film jams in the top of the imager.

CAUTION:
Whenever you raise or lower the hood, grasp the hood only in the area of the recessed slot below the local panel to avoid the possibility of pinching your fingers.

CAUTION:
Close the hood carefully. Releasing and dropping the hood could damage the laser imager.



NOTE: Remove any films in the sorter tray before attempting to open the hood.

To open the hood:

1. Grasp the hood at the recessed slot below the local panel.
2. Raise the hood until the support rod locks into the top slot.

To close the hood:

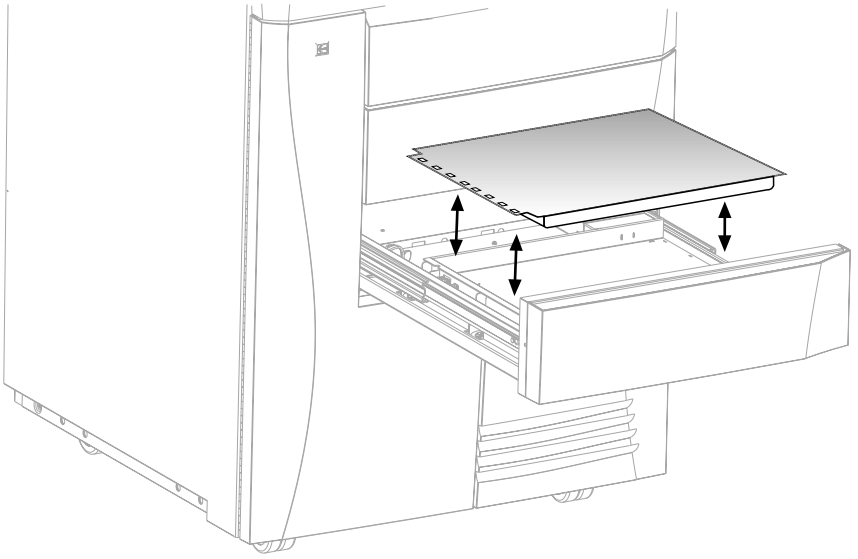
1. Raise the hood slightly and push the rod slightly to the rear from the slot.
2. Gently lower the hood to its closed position.

Loading Film Cartridges

You can monitor the number of sheets left in a film cartridge by looking at the film drawer icon on the **Status** screen. When a film cartridge runs out of film, the appropriate film drawer icon flashes, and a large zero appears in the drawer icon.

CAUTION:

To avoid injury, do not leave the laser imager unattended when the film drawers are open.



To load or unload a film cartridge:

1. At the **Door Control** or **Status** screens, touch the desired film drawer icon. The laser imager closes the cartridge and partially opens the drawer.
2. Pull the film drawer out to its furthest extension.
3. To remove a film cartridge, hold the edges of the cartridge and lift the cartridge out of the drawer.
4. To load a new or different cartridge, insert the cartridge into the film drawer with the perforations to the left.
5. Slide the drawer into the laser imager.

Recycling Empty Film Cartridges

Return your empty *Kodak DryView* film cartridges to Kodak for reuse and recycling.

Returned cartridges are carefully inspected. Only components that meet strict quality standards are reused. Components that do not meet the standards are sent to recycling centers for reclamation.

This program is part of Kodak's commitment to reduce the environmental impact of our products.

To recycle your empty film cartridges:

1. Replace your empty film cartridges in their original packages. Return as few or as many as you like each time. You can tape up to three packages together and return them with a single label.
2. Apply a prepaid bar-coded shipping label to each package. *Kodak* product labels are free of charge. To get your *Kodak* shipping labels, contact your authorized Kodak products distributor.
3. Call FedEx Ground at 1-800-463-3339 (U.S. only). Mention this program, and arrange for pickup the next working day. Include a signed "Return Pickup Record" with the packages when they are picked up. You will find one on the back of each shipping label.

For additional information on the *Kodak* Recycling Program in the U.S. and Canada, visit the Kodak Web site: www.kodak.com/go/KES

Requesting a Calibration Test Print

To request a calibration print (step wedge):

NOTE: The system will interrupt a multi-sheet print job to produce the calibration print.

1. On the **System Functions** screen, touch the **Calibration** button.
2. Touch the desired **Drawer** button.
3. Touch the **Print** button.

Requesting a Density Test Print

To request a Density test print:

1. On the **System Functions** screen, touch the **Density** button.
2. Touch the desired **Drawer** button.
3. Adjust the density as desired.
4. Touch the **Print** button.

Requesting a QC Step Wedge

To request a QC Step Wedge:

1. Request a Calibration Test Print (see "Requesting a Calibration Test Print") to put the AIQC system in control.
2. On the **System Function** Screen, touch the **QC Step Wedge for DVM** button.
3. Touch the desired drawer button (DVM film type).
4. Touch the **Print** button.

Automatic Image Quality Control (AIQC)

The built-in densitometer is a key component in the patented Automatic Image Quality Control (AIQC) process. The AIQC feature allows the laser imager to automatically monitor and adjust image quality parameters to ensure optimum image quality.

The laser imager adjusts the parameters each time the laser imager prints a calibration film to ensure image consistency from film-to-film and lot-to-lot. A calibration film is printed whenever:

- AIQC detects that a new film lot number has been loaded.
- You request a calibration test from the local panel.
- A calibration has not been performed on a film cartridge for 7 days.

Operating in Manual Mode

Under normal conditions, AIQC is running to maintain consistent image-quality parameters. If errors occur, such as calibration failure, you can operate in manual mode until the error is corrected.

A film calibration failure is often film related. If you load a new film cartridge, the error is usually corrected. If the error reoccurs with a new film cartridge, call for support (see "Calling for Support" on page 4-33).

When the laser imager is in manual mode, a manual mode icon appears on the local panel.

Operator Maintenance

Cleaning the Laser Imager

Clean the outside surfaces of the laser imager as necessary. Use a soft cloth with warm water and mild soap.

CAUTION:

Do not use isopropyl alcohol to clean the exterior surfaces of the laser imager. Isopropyl alcohol can dissolve the exterior paint on the laser imager.

Installing a New Charcoal Filter

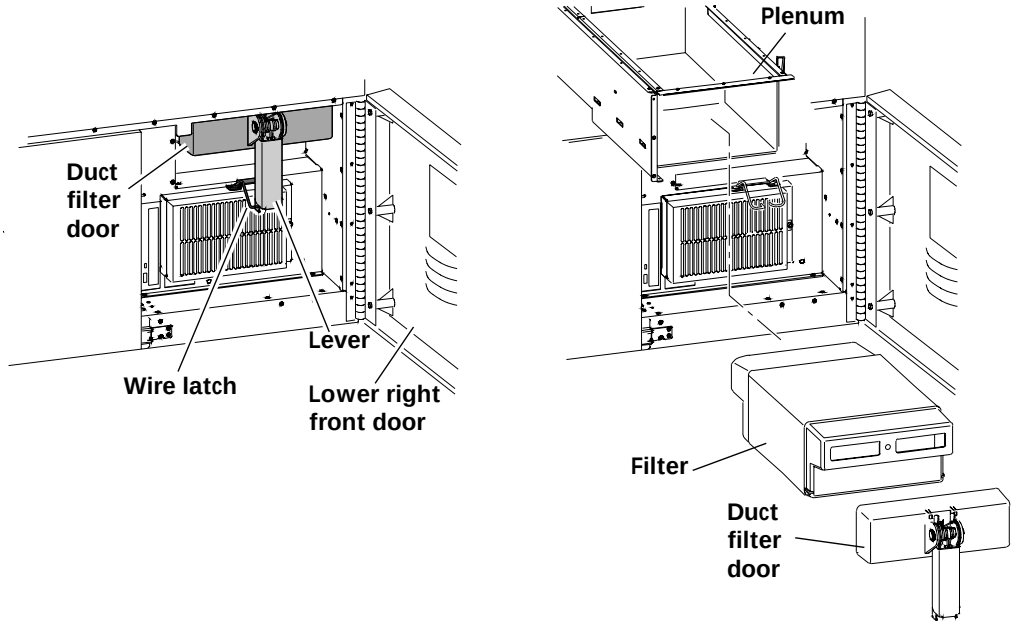
A charcoal filter is in a filter holder that is mounted behind the lower right front door of the laser imager.

Install new filters after every 20,000 film cycles.

NOTE: Authorized Service Providers of Kodak products routinely install new filters during the 20,000 film cycle Preventive Maintenance procedure. You only need to change filters if you do not have Kodak's Preventive Maintenance Plan.

CAUTION:

Filters are considered to be non-hazardous waste according to the US Environmental Protection Agency Resource Recovery Act. You may dispose of the filters in a landfill or incinerator with energy recovery in a municipal, commercial or industrial facility. Contact your state or local government to determine if additional disposal requirements apply.



Replacing the Charcoal Filter

To install new filter:

1. Open the lower right front door.
2. Remove the duct filter door.
   a. Press in on the door lever.
   b. Disconnect the wire latch.
3. Remove the used charcoal filter.
4. Vacuum the plenum, if necessary.
5. Record on the label of each of the new filters:
   - Cycle count
   - Date
6. Install the new filter.
7. Install the duct filter door.
8. Close the lower right front door.
9. Discard the used filter.

Preventive Maintenance

To maintain optimum performance from the laser imager, Kodak recommends that preventive maintenance be completed by an Authorized Service Provider of Kodak products after every 20,000 film cycles.

The **Status** screen displays a "Preventive Maintenance" icon when the film count reaches 20,000 sheets of film. You can also monitor the "Prints to PM" line on the **System Information** screen.

Preventive Maintenance includes:

- Installation of a new charcoal filter
- Image assembly cleaning
- Film processor cleaning

Call an Authorized Service Provider of Kodak products to schedule preventive maintenance (see "Calling for Support" on page 4-33).

Key Operator Information

A **Key Op** icon appears on every screen where Key Operator access is possible. This icon indicates when the Key Operator level is active. When active, the icon is highlighted.

Key Operator access remains until:

- The system times out and returns to the **Status** screen (the default timeout is 2 minutes).

NOTE: This access time can be set by an Authorized Service Provider of Kodak products from 30 to 300 seconds (0.5 to 5 minutes).

- You use the **Key Op** icon to cancel the access level.

Up to 10 Key Operator accounts are allowed. Accounts are identified by a number (User ID) between 1 and 10.

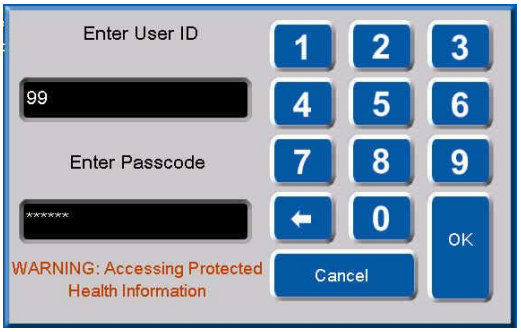
Passcodes are determined by the customer and activated by an Authorized Service Provider of Kodak products.

Key Operator Passcode

To access the **Key Operator Login** screen, touch the **Key Op** icon or select a screen that requires Key Operator access.

To enter your passcode:

1. Touch the **Key Op** icon on the local panel. The **Key Op Login** screen appears.



2. Enter your ID and touch the **Enter Passcode** box.
3. Enter your passcode. Touch **OK**.

When the **Key Op** access is activated, the icon is highlighted.

Key Op access deactivates if the laser imager times out and returns to the **Status** screen or if you cancel the access level.

To deactivate **Key Op** access:

- Touch the **Key Op** icon.

Setting Time and Date

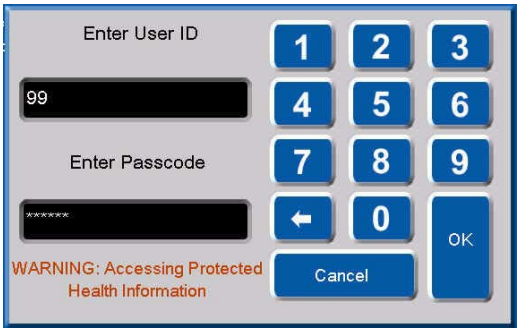
The time and date appears in the right side of the title bar.

Key Operators can set the time, time format, and date format.

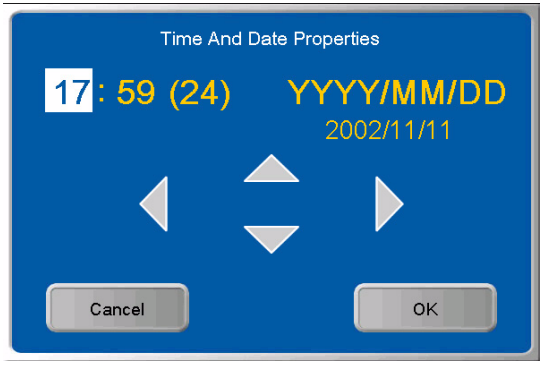
- Formats for time include AM/PM or 24-hour (military).
- Formats for date include
  - MM_DD_YYYY
  - DD_MM_YYYY
  - YYYY_MM_DD

To change the time, time format, or date format:

1. Touch the time and date display on the title bar. The **Key Op Login** screen appears.



2. Enter your ID and touch the **Enter Passcode** box.
3. Enter your passcode. Touch **OK**. The **Time and Date Properties** screen appears.



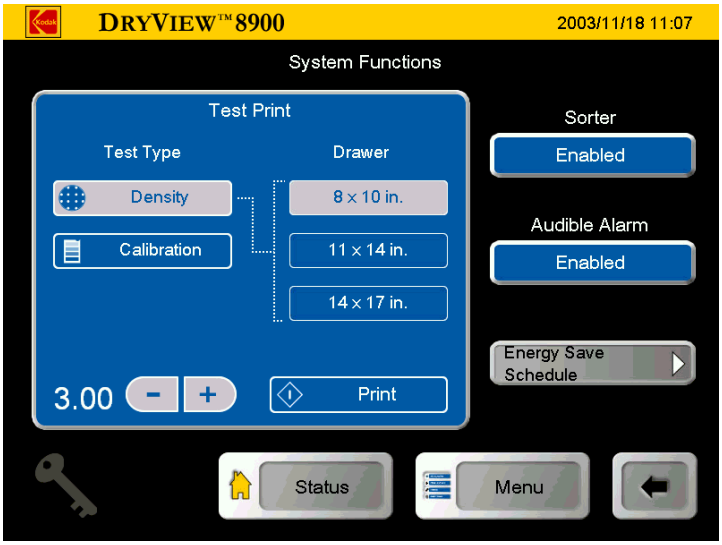
4. Use the left and right arrows to navigate to your desired time or date field.
5. Use the up and down arrows to change the time or date values.
6. Touch **OK**.

Audible Alarm (On/Off)

An audible alarm alerts operators when an error message or notice appears on the local panel. Key Operators can disable or enable the audible alarm function.

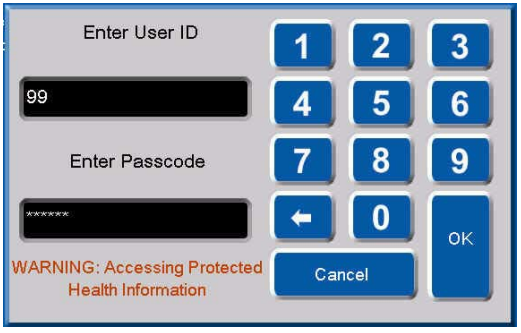
To enable or disable the audible alarm:

1. At the **Main Menu** screen, touch the **System Functions** button. The **System Functions** screen appears.



System Functions

2. Touch the **Audible Alarm** button. The **Key Op Login** screen appears.



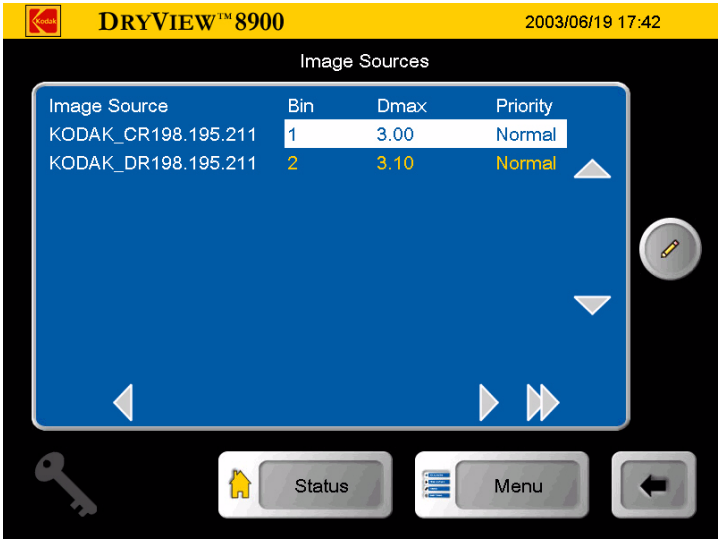
3. Enter your ID and touch the **Enter Passcode** box.
4. Enter your passcode. Touch **OK**.
5. At the System Functions screen, touch the **Audible Alarm** button.

Selecting Bins

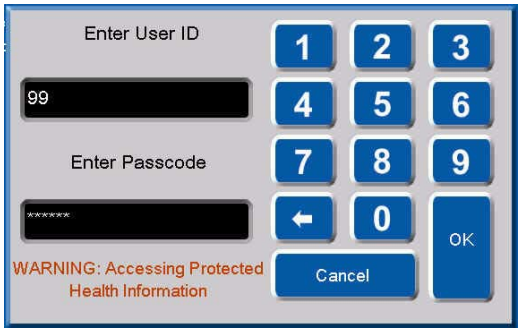
This function is only available if the imager is configured with a sorter. Key Operators can select bins for each available modality.

To assign a modality to a bin:

1. At the **Image Sources** screen, use the up and down arrows to select a modality.



2. Touch the **Edit** button. The **Key Op Login** screen appears.



3. Enter your ID and touch the **Enter Passcode** box.
4. Enter your passcode. Touch **OK**. The **Image Source Editor** screen appears.

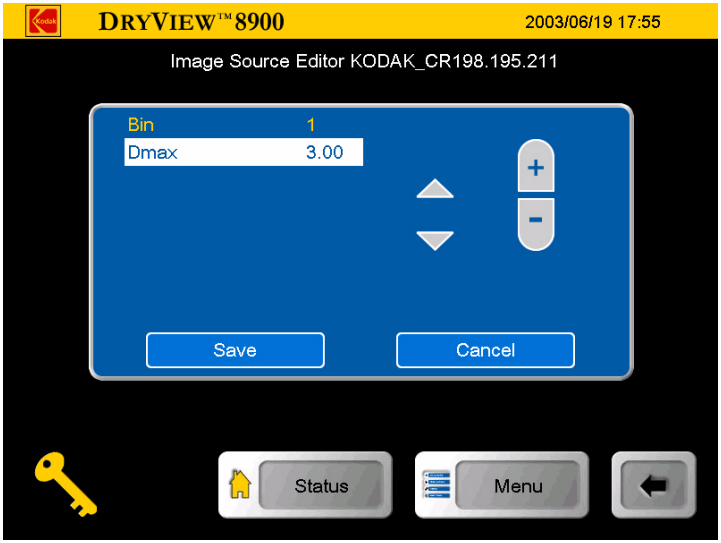


Image Source Editor

5. Touch the up or down arrows to highlight **Bin**.
6. Touch the **+** or **-** to select your desired bin.
7. Touch **Save**.

Changing Dmax

Key Operators can change the Dmax value for each available modality.

To change a Dmax value:

NOTE: Modality settings may override the setting you enter.

1. At the **Image Sources** screen, use the up and down arrows to select a modality.

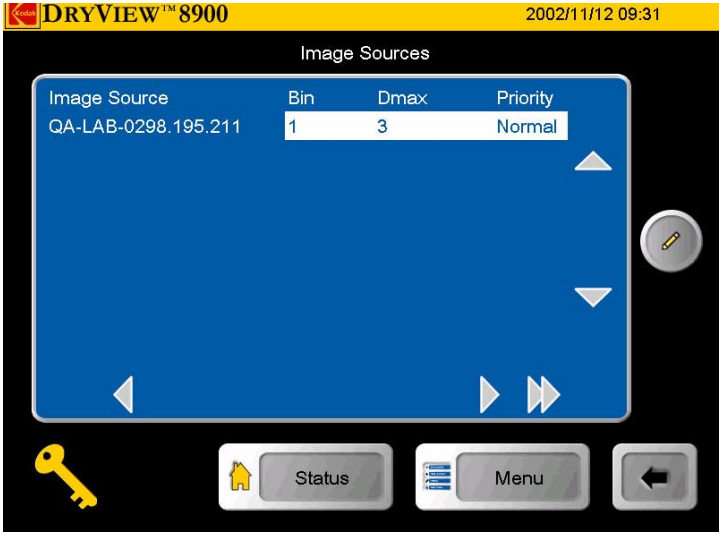
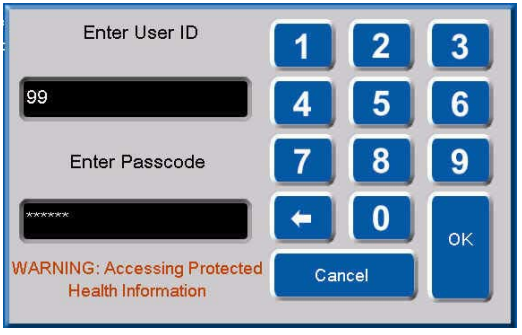


Image Sources

2. Touch the **Edit** button. The **Key Op Login** screen appears.



3. Enter your ID and touch the **Enter Passcode** box.

4. Enter your passcode. Touch **OK**. The **Image Source Editor** screen appears.

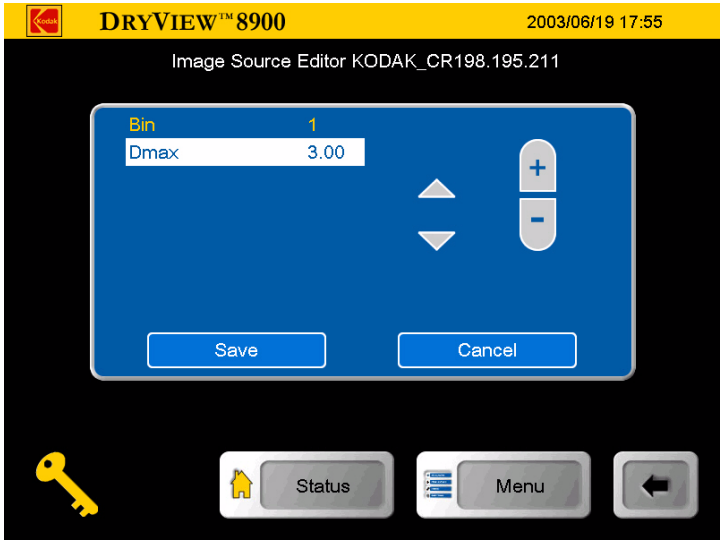


Image Source Editor

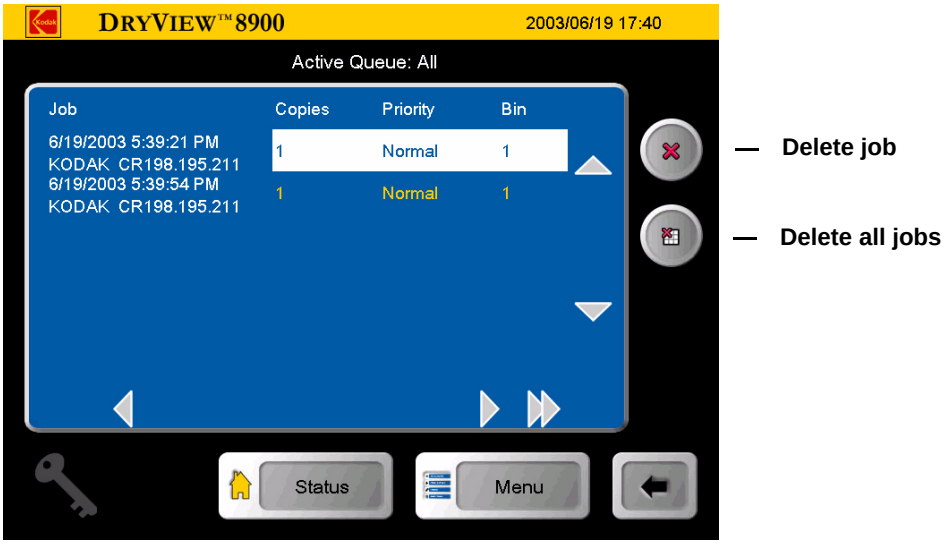
5. Touch the up and down arrows to highlight **Dmax**.
6. Touch the **+** or **-** to select your desired Dmax value.
7. Touch **Save**.

Deleting Print Jobs

Key Operators can delete one or all print jobs in the print queues.

To delete a print job or all jobs:

1. At the **Job Management** screen, use the up and down arrows to select **Active, No Media** or **Undelivered - print queue.**
2. Touch the **View List** button. The **Active Queue:** screen appears.

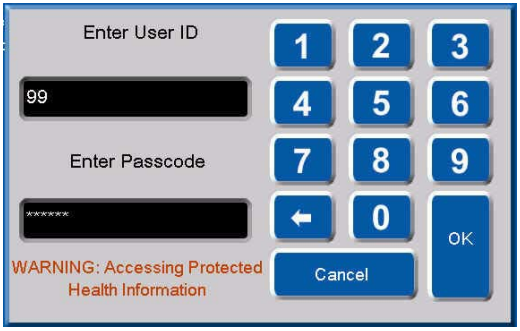


Active Queue

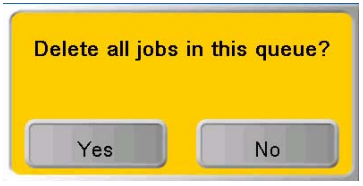
3. Use the up or down arrows to navigate to your desired print job.

NOTE: Jobs can be deleted from the active queue as long as the delivery of that job has not started. After selecting a job(s) to delete from the **Active Queue** screen, there is no indication of deletion until the jobs that are currently printing are completed. When the current job is finished printing, the **Status** screen and **Job Management** screens show the selected jobs have been deleted.

4. Touch the **Delete Job** icon or the **Delete all Jobs** icon. The **Key Op Login** screen appears.



5. Enter your ID and touch the **Enter Passcode** box.
6. Enter your passcode. Touch **OK**. The **Delete this job** or the **Delete all jobs in the queue** pop-up screen appears.



7. Touch **Yes**.

Reprinting Print Jobs

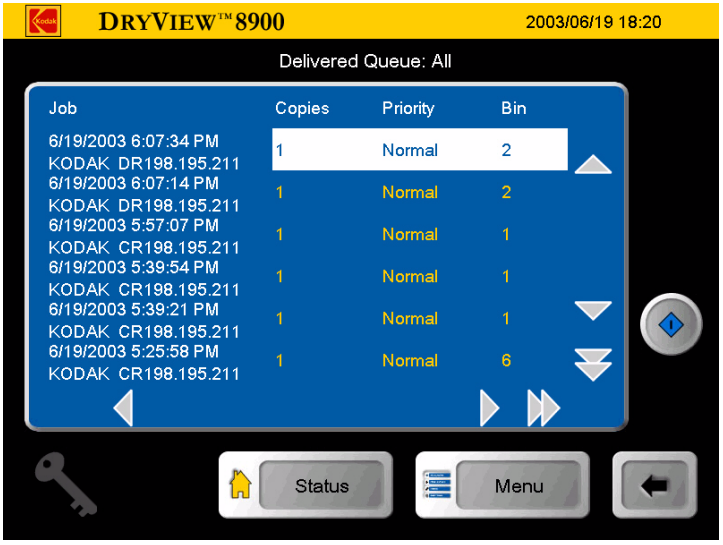
Key Operators can reprint completed print jobs.

To reprint a job:

NOTE: The reprint capability of the laser imager enables Levels 2, 3, and 4 operators to command reprinting of images that may contain patient-identifiable data. Operators must log in to control access to such information.

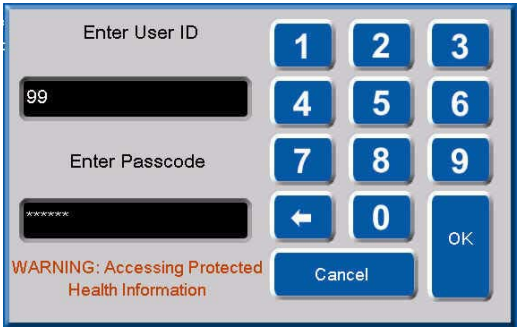
1. At the **Job Management** screen, use the up and down arrows to select **Delivered**.

2. Touch the **View List** button. The **Delivered Queue:** screen appears.



Delivered Queue

3. Use the up or down arrows to navigate to your desired print job.
4. Touch the **Reprint** icon. The **Key Op Login** screen appears.



5. Enter your ID and touch the **Enter Passcode** box.

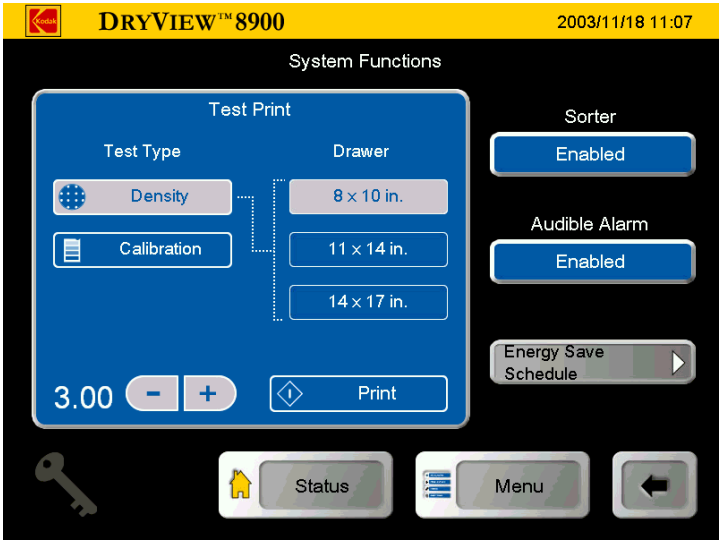
6. Enter your passcode. Touch **OK**. The following pop-up screen appears.

7. Touch **Yes**.

Scheduling the Automatic Energy Save Mode

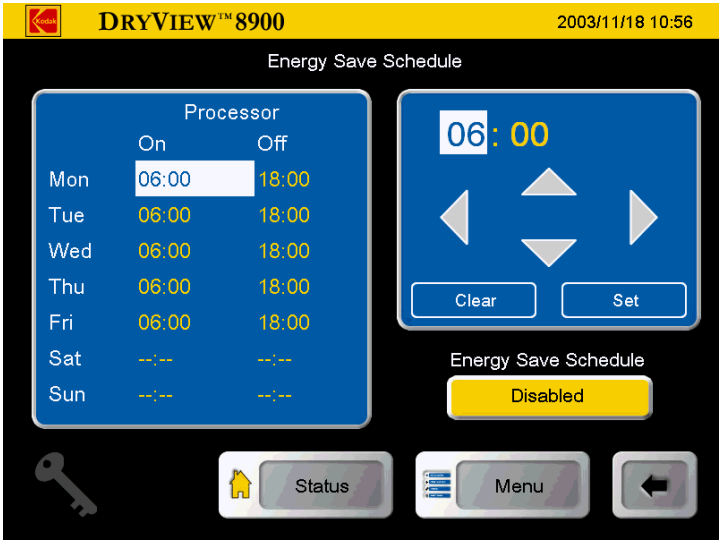
To schedule the Automatic Energy Save Mode:

1. At the **Main Menu** screen, touch the **System Function** button. The **System Function** screen appears.



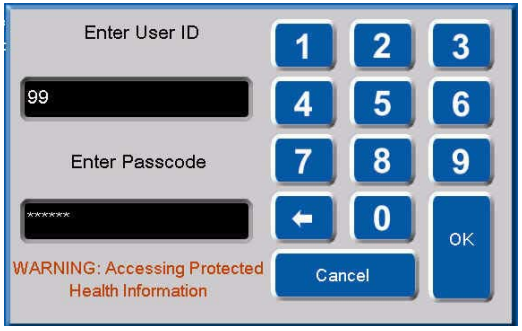
Systems Functions

2. Touch the **Energy Save Schedule** button. The **Energy Save Schedule** screen appears.

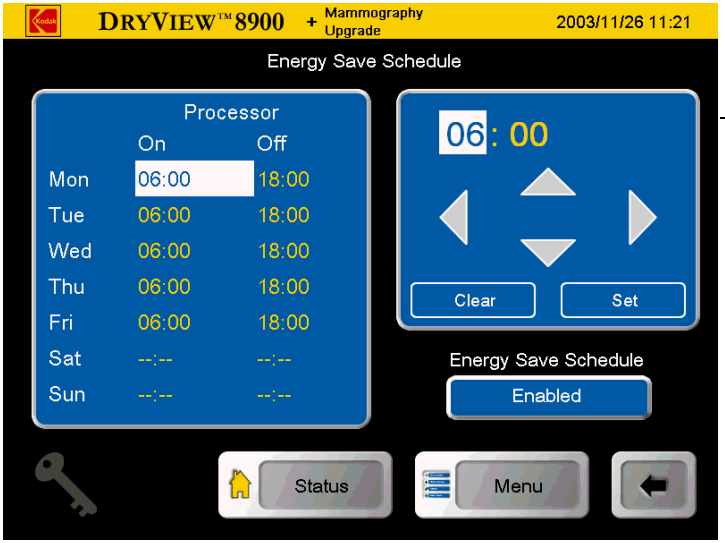


Energy Save Schedule

3. Touch the **Enable / Disable** button. The **Key Op Login** screen appears.



4. Enter your ID and touch the **Enter Passcode** box.
5. Enter your Passcode and touch **OK**. The **Energy Save Schedule** screen appears.

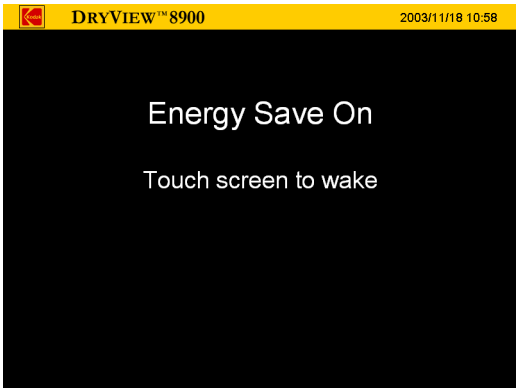


Energy Save Schedule

6. Set the ON / OFF time by touching the Processor schedule control for the chosen ON / OFF time to set or clear. Use the time control at the right to adjust the times. Use the left and right arrows to select hour or minutes. Use the up or down arrows to change the time in hours or minutes (minutes in 15 minute increments). Touch the Set button to update the selected time on the schedule. Touch the next processor schedule control to choose the next ON / OFF time to set or clear. Touch the Enable/Disable button and choose Enabled to activate this schedule.

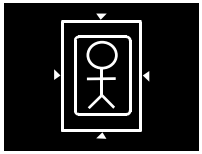
NOTE: We recommend you set the **ON** time to one hour prior to expected imager use. This allows the processor temperature to completely stabilize.

NOTE: When the **Energy Save** mode is activated, the imager shuts down the film processor heaters and 30 minutes later shuts down the processor drum motor. The **Energy Save On** screen is displayed on the local panel. If the imager is in the **Energy Save** mode, it automatically begins warm-up when a job is received. The imager automatically returns to **Energy Save** mode when the job is printed. The **Energy Save** mode will not be activated if there are jobs pending in the **Active, No Media**, or **Undelivered** queues. These jobs must be cleared or deleted by the **Key Op**, if they are in the undelivered queue.



Energy Save On

Image Resizing Icons

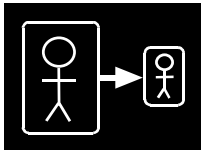


If an image has been resized or cropped, an icon appears on the bottom of the film. There are three types of icons that appear.

- **Crop**. The image perimeter is removed to allow the image to fit on the film and print at the same scale as the anatomical area of interest.

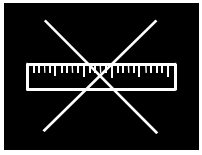
  An image might be cropped if it is too large to print on the selected film size, and the size of the area of interest is important to retain.

CAUTION:
If anatomical areas of interest are near an outer edge of the image, they might be removed from the image when it is printed.



- **Minify**. **The image file is reduced by the removal of pixel data.**

  An image might be minified if the image size is larger than the media in the imager. For example, a computed radiography (CR) image is requested to print 35 x 43 cm at the imager with 8 x 10 in. (20.32 x 25.4 cm) film selected. The image is minified and printed.



- **Scale**. **The image file is reduced in scale**.

  An image file is reduced in scale if it is sent from an image source with a requested image size that is not supported by the imager. The full image is printed, but the size of the image is reduced to allow it to print on the media size that is closest to the requested size.

4 Troubleshooting

Status and Error Messages

Occasionally, you may have to correct minor problems. If more serious malfunctions occur, you must contact an Authorized Service Provider of Kodak products (see "Calling for Support" on page 4-33).

To determine the operator action required, monitor imager operation and note the imager status and error messages.

Local Panel Status Messages

The local panel **Status** screen displays messages to provide information on the overall status and activities of the laser imager. The **Status** screen also displays more detailed information on each film drawer.

Main Status Screen	Details
Self-Test	Occurs when the power is first applied to the machine control system.
Ready	The printer is online and the processor has reached operating temperature.
Warming = xx	The processor is currently warming. xx represents the number of minutes estimated until ready.
Stopped	An error has occurred that prevents printing.
Printing	The imager is currently printing.
Door open	The front or back door is open.
Hood open	The hood is open.
Printer offline	Printing has been suspended.
Energy Save	The processor heater is off.

Main Status Screen	Details
Door open requested	The printer is completing prints in progress.
Sorter disabled	Film is directed to the default bin.
Drawer open	At least one of the film drawers is open.
Shutdown requested	The printer is completing prints in progress.
Service mode	The Service Override switch is enabled.
Preventive Maintenance indicator	Call an Authorized Service Provider of Kodak products to schedule Preventive Maintenance.
Film Drawer Status Messages	**Details**
Opening... Please wait	The film cartridge is currently opening.
Open	The film supply drawer is open.
Calibrating... Please wait	A calibration is in progress for this film cartridge.
Not Calibrated	The film cartridge is not calibrated.
Fail	An error has occurred, affecting normal operation.
No Cartridge	There is currently no cartridge in the film supply drawer.
Open Requested ... Please Wait	A request to open the film supply drawer is pending.
Job Manager Status Message	**Details**
Active	The imager can accept job requests and film is available.

Main Status Screen	Details
No Media	The imager can accept job requests, but film is not available for at least 1 current job.
Offline	The imager will not accept any DICOM job requests.

Local Panel Error Messages

The following table lists the error messages displayed on the local panel. When an error message is displayed, perform the operator action listed in the table for that message.

When an error message occurs, an audible alarm will sound.

To silence the audible alarm:

1. When an error message appears, touch anywhere in the error pop-up menu.
2. When a no-media message appears, touch any tray button or the **Job Management** button on the **Status** screen.

NOTE: The laser imager prints a job only with the specified size/media base type requested. If the size/base is not loaded, the print request is put into the "No Media" queue and the laser imager waits for the correct type to be loaded.

If this action does not clear the error message, call an Authorized Service Provider of Kodak products. When you make a service call, be prepared with the error message and message number (see "Calling for Support" on page 4-33).

Preventive Maintenance Icon

NOTE: The laser imager displays a local panel icon when preventive maintenance and cleaning are recommended. Preventive maintenance and cleaning ensure optimum imager performance. The preventive maintenance message will not interfere with normal operation and is intended to let you schedule a convenient time for preventive maintenance performed by an Authorized Service Provider of Kodak products.

Operator Actions

The action “Restart the laser imager” means to shut down and restart the laser imager. To restart the laser imager:

1. Touch the **Power** icon on the local panel.
2. Touch the **Restart** icon and select **Yes**. The laser imager will restart automatically.

The action to “open door manually” is described in “Film Drawers and Front Door Manual Override Latches” on page 3-14.

The action to “close the film cartridge” is described in “Manually Closing the Film Cartridge Lid” on page 4-26.

Number	Message Display	Message Details	Operator Action
02-104	Inadequate disk Space for New Job	Too many jobs in the Undelivered or No Media queue.	1. Delete jobs in the Undelivered Queue. 2. Load requested media for jobs in pending queue.
03-111	Undelivered Job due to Rendering Error	Job failed because of bad image data.	Delete job from the Undelivered Queue.
10-001	Delivery Server Internal Error	The laser imager can no longer accept jobs.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
10-003	Delivery Server Image Datapath Error	The laser imager can no longer accept jobs.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
10-004	USB Failed to Initialize	The laser imager can no longer accept jobs.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
10-910	MCS Communication Down	Jobs will continue to be queued, but new film will not be initiated.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
20-154	Internal Communication Failure: MCS	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
20-208	Front Door Failed to Open	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the door manually. 2. If the error persists, call an Authorized Service Provider of Kodak products.
20-209	Laser Imager Opened During Self Test	Jobs will continue to be queued, but new film will not be initiated.	1. Close any open drawers, door, or hood. 2. Restart the laser imager. 3. If the error persists, call an Authorized Service Provider of Kodak products.
20-914	Internal Image Data Transfer Failed	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
20-915	Internal Image Data Transfer Failed	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
20-917		Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
20-918	Internal Image Data Transfer Failed	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-116	Film Jam in Area 1: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Remove any film. 4. Close the drawer.
21-118	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the problem persists, call an Authorized Service Provider of Kodak products.
21-119	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-120	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
21-125	Internal Hardware Failure: Feed Rollers	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-126	Film Jam in Area 1: Feed Rollers	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Remove any film. 4. Close the drawer.
21-135	Drawer Failed to Open	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the drawer manually. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-139	Unable to Identify Film Cartridge	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-145	Unsupported Media Type	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-146	Unsupported Media Size	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
21-175	Rollback failed to Engage Cartridge	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-176	Film Cartridge Failed to Fully Open	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-177	Film Cartridge Failed to Close	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Close the drawer. 4. If the error persists, call an Authorized Service Provider of Kodak products.
21-178	Film Cartridge Failed to Open	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-179	Film Cartridge Failed to Close	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Close the drawer. 4. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
21-624	Calibration Failed: Film Density Readings not Monotonic	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
21-631	Calibration Failed: Film Dmin Outside Target	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, disable AIQC for this film cartridge (see "Automatic Image Quality Control (AIQC)" on page 3-20).
21-632	Calibration Failed: Film Dmax Outside Target	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, disable AIQC for this film cartridge (see "Automatic Image Quality Control (AIQC)" on page 3-20).
22-116	Film Jam in Area 1: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Remove any film. 4. Close the drawer.
22-118	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-119	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
22-120	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-125	Internal Hardware Failure: Feed Rollers	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-126	Film Jam in Area 1: Feed Rollers	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Remove any film. 4. Close the drawer.
22-135	Drawer Failed to Open	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the drawer manually. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-139	Unable to Identify Film Cartridge	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-145	Unsupported Media Type	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
22-146	Unsupported Media Size	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-175	Rollback Failed to Engage Cartridge	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-176	Film Cartridge Failed to Open	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-177	Film Cartridge Failed to Close	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close cartridge to prevent film from fogging. 3. Close the drawer. 4. If the error persists, call an Authorized Service Provider of Kodak products.
22-178	Film Cartridge Failed to Open	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
22-179	Film Cartridge Failed to Close	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Close the drawer. 4. If the error persists, call an Authorized Service Provider of Kodak products.
22-624	Calibration Failed: Film Density Readings not Monotonic	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
22-631	Calibration Failed: Film Dmin Outside Target	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, disable AIQC for this film cartridge (see "Automatic Image Quality Control (AIQC)" on page 3-20).
22-632	Calibration Failed: Film Dmax Outside Target	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, disable AIQC for this film cartridge (see "Automatic Image Quality Control (AIQC)" on page 3-20).
23-116	Film Jam in Area 1: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Remove any film. 4. Close the drawer.

Number	Message Display	Message Details	Operator Action
23-118	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-119	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-120	Internal Hardware Failure: Film Pickup	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-125	Internal Hardware Failure: Feed Rollers	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-126	Film Jam in Area 1: Feed Rollers	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Remove any film. 4. Close the drawer.
23-135	Drawer Failed to Open	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the drawer manually. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
23-139	Unable to Identify Film Cartridge	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-145	Unsupported Media Type	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-146	Unsupported Media Size	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-175	Rollback Failed to Engage Cartridge	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-176	Film Cartridge Failed to Open	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-177	Film Cartridge Failed to Close	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Close the drawer. 4. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
23-178	Film Cartridge Failed to Open	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-179	Film Cartridge Failed to Close	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Open the drawer. 2. Close the cartridge to prevent film from fogging. 3. Close the drawer. 4. If the error persists, call an Authorized Service Provider of Kodak products.
23-624	Calibration Failed: Film Density Readings not Monotonic	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, call an Authorized Service Provider of Kodak products.
23-631	Calibration Failed: Film Dmin Outside Target	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, disable AIQC for this film cartridge (see "Automatic Image Quality Control (AIQC)" on page 3-20).
23-632	Calibration Failed: Film Dmax Outside Target	Jobs will continue to be queued. Printing will continue from any other supply drawer.	1. Try a new film cartridge. 2. If the error persists, disable AIQC for this film cartridge (see "Automatic Image Quality Control (AIQC)" on page 3-20).

Number	Message Display	Message Details	Operator Action
24-931	Internal Communications Failure: Film Cartridge Controller	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
24-154	Internal Communications Failure: Film Cartridge Controller	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
25-154	Internal Communications Failure: RF Tag	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
25-922	Internal Diagnostic Failure: RF Tag	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
25-931	Internal Communications Failure: RF Tag	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
26-164	Film Jam in Area 2: Platen	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the front door. 2. Remove any film. 3. Close the door.
26-165	Film Jam in Area 3: Transport	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the front door. 2. Remove any film. 3. Close the door.

Number	Message Display	Message Details	Operator Action
26-166	Film Jam in Area 2: Transport	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the front door. 2. Remove any film from the vertical transport and film platen. 3. Close the door.
26-167	Film Jam in Area 2: Transport	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the front door. 2. Remove any film. 3. Close the door.
26-169	Film Jam in Area 3: Platen	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the front door. 2. Remove any film. 3. Close the door.
26-542	Film Jam in Area 4: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the hood. 2. Remove any film. 3. Close the hood.
26-543	Film Jam in Area 5: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the hood. 2. Remove any film. 3. Close the hood.
26-544	Film Jam in Area 5: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the hood. 2. Remove any film. 3. Close the hood.
26-545	Film Jam in Area 5: Sorter	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the hood. 2. Remove any film. 3. Close the hood.
26-546	Film Jam in Area 6: Sorter	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Open the hood. 2. Remove any film. 3. Close the hood.
27-121	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
27-123	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-124	Internal Hardware Failure: Platen	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-127	Internal Hardware Failure: Platen	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-128	Internal Hardware Failure: Platen	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-154	Internal Communications Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-601	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
27-602	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-603	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-604	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-605	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-606	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-607	Calibration Failed: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
27-611	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-640	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-641	Internal Diagnostic Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-642	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-643	Internal Diagnostic Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-644	Internal Communications Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
27-645	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-646	Internal Hardware Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-914	Internal Image Transfer Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-915	Internal Image Transfer Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-916	Internal Diagnostic Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
27-931	Internal Communications Failure: Optics	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

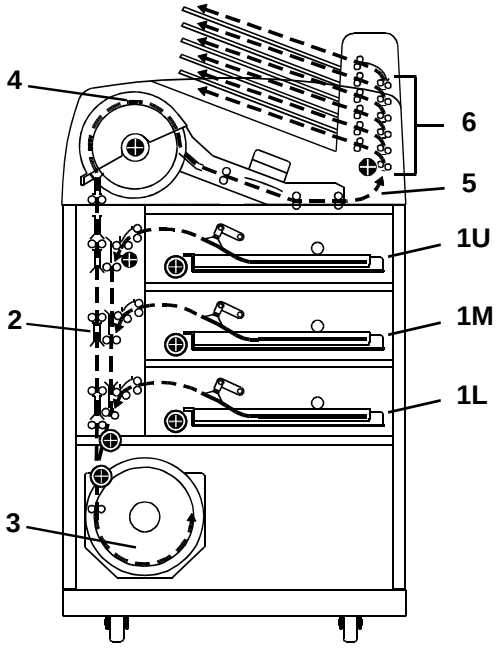
Number	Message Display	Message Details	Operator Action
28-154	Internal Communications Failure: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
28-155	Internal Communications Failure: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
28-501	Internal Hardware Failure: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
28-506	Internal Communications Failure: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
28-509	Processor Warm-up Failure	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
28-551	Processor Heater Failure	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
28-554	Processor Over Temperature	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
28-931	Internal Communications Failure: Processor	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
29-154	Internal Communications Failure: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
29-924	Internal Diagnostic Failure: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
29-925	Internal Diagnostic Failure: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
29-926	Internal Diagnostic Failure: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Number	Message Display	Message Details	Operator Action
29-927	Internal Diagnostic Failure: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
29-931	Internal Communications Failure: Densitometer	Jobs will continue to be queued. Film affected by the error will be reprinted.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
30-154	Internal Communications Failure: Sorter	Jobs will continue to be printed. All films are sent to sorter bin 1.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
30-930	Internal Hardware Failure: Sorter	Jobs will continue to be printed. All films are sent to sorter bin 1.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
30-931	Internal Communications Failure: Sorter	Jobs will continue to be printed. All films are sent to sorter bin 1.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.
31-931	Internal Communications Failure: FPGA	Jobs will continue to be queued, but new film will not be initiated.	1. Restart the laser imager. 2. If the error persists, call an Authorized Service Provider of Kodak products.

Clearing Film Jams

The numbers in the illustration identify key areas on the path from film pickup to exposure, through development and onto the film sorter.



Jam Areas

1 Film pickup from the cartridge.

2 Vertical film path between the film pickup area and the film platen, and between the film platen and the processor drum.

3 Film platen.

4 Film processor drum.

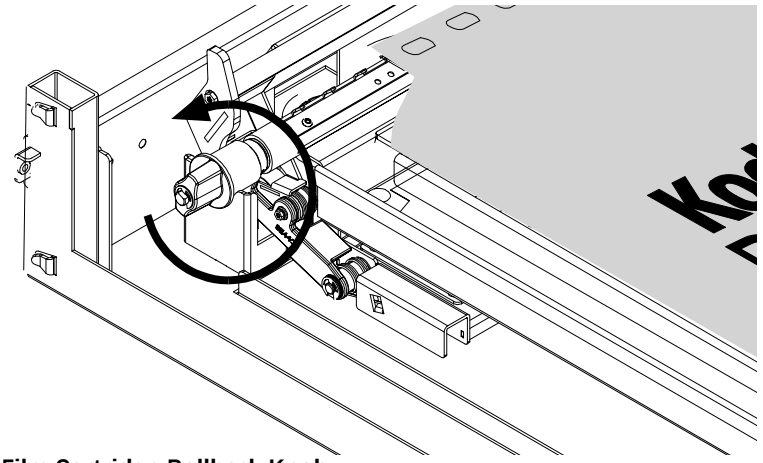
5 Film feed through the densitometer and onto the sorter.

6 Film feed within the sorter.

Manually Closing the Film Cartridge Lid

Film cartridges must be closed manually if the drawers are opened without the film cartridge closing automatically.

NOTE: If the drawers are opened without the film cartridge closed, several sheets of film at the top of the cartridge will be exposed (fogged) and should be discarded. Before opening the drawer, make the room as dark as possible to minimize exposure.



Film Cartridge Rollback Knob

To manually close the film cartridge:

1. Lift the desired drawer override latch (see "Film Drawers and Front Door Manual Override Latches" on page 3-14).
2. Pull the film drawer out to its furthest extension.
3. Turn the rollback knob counterclockwise until the film cartridge lid is closed. Continue turning the rollback knob until it cannot be rotated further.

Film Pickup Problems in Area 1U, 1M, or 1L

The area where the film is removed from the film cartridge and positioned to the drive rollers is Area 1. If the laser imager cannot properly pick up a sheet of film and position the film to the drive, an error message appears on the local panel.

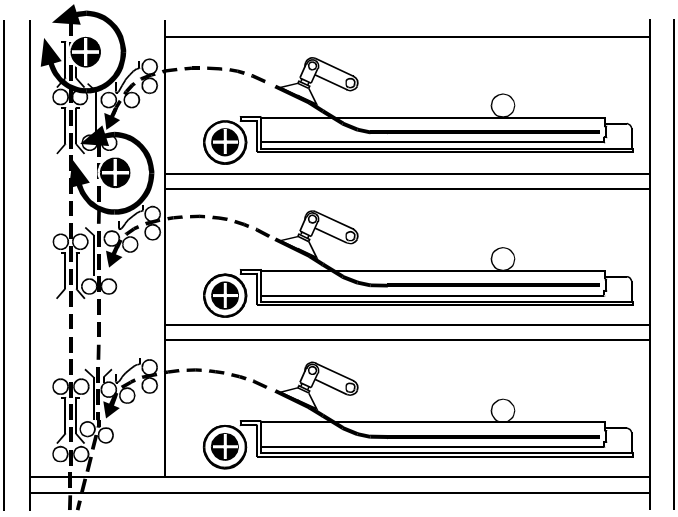
NOTE: When problems occur in Area 1, the film cartridge remains open. When you open the drawer, the top sheets of film in the cartridge will be exposed (fogged). Before opening the drawer, make the room as dark as possible to minimize exposure. Discard any fogged film.

When the Film Jam in Area 1: message appears:

1. Touch the **Show Jam** button. The **Door Control** screen appears and the affected drawer is highlighted.
2. Touch the affected drawer icon. The drawer opens.
3. Pull the drawer out to its furthest extension.
4. Remove any film outside the cartridge box and then turn the rollback knob counterclockwise to manually close the cartridge lid (see "Manually Closing the Film Cartridge Lid" on page 4-26).
5. Close the drawer.
6. If you cannot resolve the problem, call an Authorized Service Provider of Kodak products.

Clearing Film Jams from Area 2

The vertical transport between the film pickup area and the film platen, and between the film platen and the processor drum is Area 2. If film jams in this area, an error message appears on the local panel.



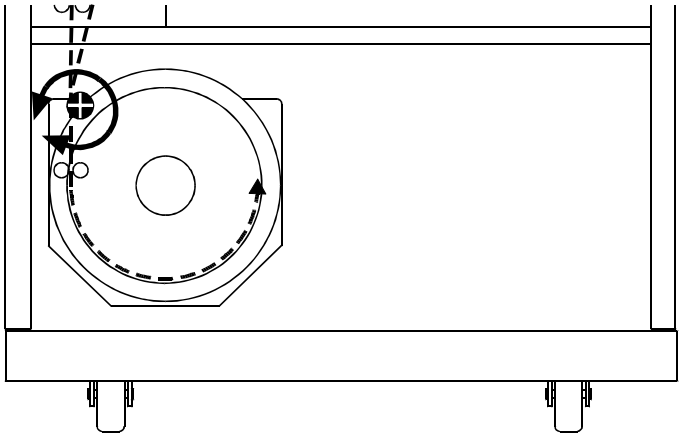
Vertical Transport Rollback Knobs

When the Film Jam in Area 2: error message appears:

1. Touch the **Show Jam** button. The **Door Control** screen appears and the affected area is highlighted.
2. Touch the front door icon. The front door opens.
3. Locate the jammed film in the vertical transport.
4. Remove the jammed film. If the film is jammed in one of the feed roller sets, turn the rollback knob in the appropriate direction to free the film.
5. Close the front door.
6. If you cannot clear the jammed film, call an Authorized Service Provider of Kodak products.

Clearing Film Jams from Area 3

The film platen is Area 3. If film jams in this area, an error message appears on the local panel.



Clearing Film Jam Area 3

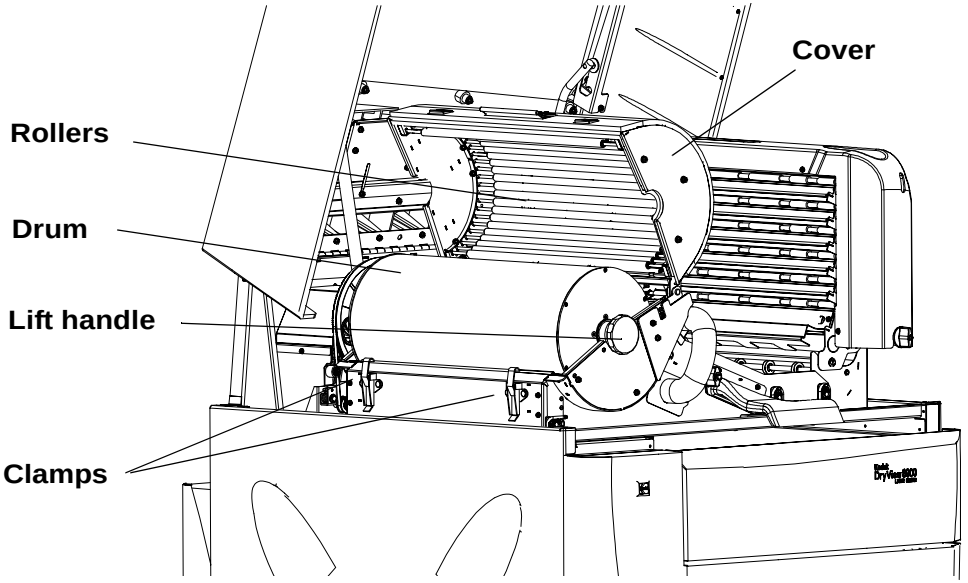
When the Film Jam in Area 3: error message appears:

1. Touch the **Show Jam** button. The **Door Control** screen appears and the affected area is highlighted.
2. Touch the front door icon. The front door opens.
3. Locate the jammed film in the platen or vertical transport.

4. Remove the jammed film. If the film is jammed in one of the feed roller sets, turn the rollback knob in the appropriate direction to free the film.
5. Close the front door.
6. If you cannot clear the jammed film, call an Authorized Service Provider of Kodak products.

Clearing Film Jams from Area 4

The film processor drum is Area 4. If film jams in this area, an error message appears on the local panel.



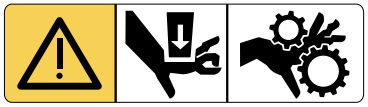
Clearing Film Jam Area 4

When the Film Jam in Area 4: error message appears:

1. Touch the **Show Jam** button. The **Door Control** screen appears and the affected area is highlighted.
2. Open the hood to its first locking position.

CAUTION:
Hot Surface. Drum and rollers inside the processor are hot. Exercise caution when removing jammed film from the processor.

3. Release the two clamps at the left of the processor.



CAUTION:

Whenever you raise or lower the drum cover, grasp the cover only on the lift handle to avoid the possibility of pinching your fingers.

4. Open the drum cover.

CAUTION:

To prevent damage to the surface of the processor drum, do not use any type of tool to remove jammed film.

5. Clear the jammed film from the processor area. There may be more than one sheet.

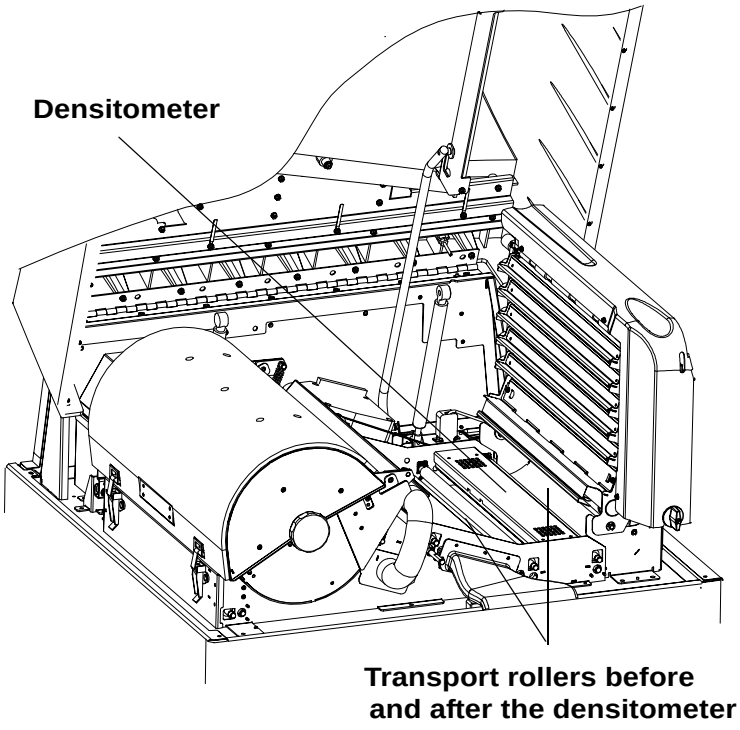
NOTE: If the film is jammed in the lower section of Area 4, open the front door to remove the film (see "Clearing Film Jams from Area 2" on page 4-27).

6. Close the drum cover and secure it with the two clamps.
7. Close the hood.
8. If you cannot clear the jammed film, call an Authorized Service Provider of Kodak products.

NOTE: The processor has to warm up to operating temperature before the processor can print.

Clearing Film Jams from Area 5

The drive rollers prior to the sorter are Area 5. If film jams in this area, an error message appears on the local panel.



Clearing Film Jam 5

When the Film Jam in Area 5: error message appears:

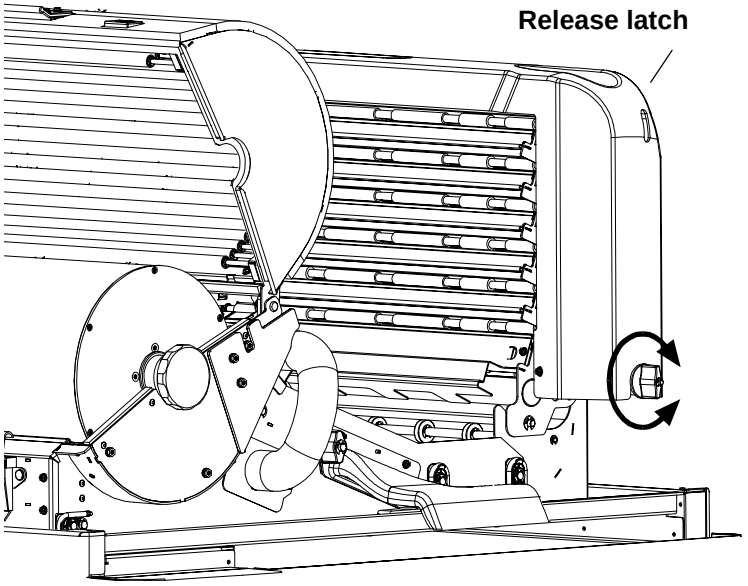
1. Touch the **Show Jam** button. The **Door Control** screen appears and the affected area is highlighted.
2. Open the hood to its first locking position.

CAUTION:
Hot Surface. Drum and rollers inside the processor are hot. Exercise caution when removing jammed film from the processor.

3. Remove the jammed film in the film path from the processor to the sorter.
4. Grasp the film and pull upward at a 90° angle.
5. Close the hood.
6. If you cannot clear the jammed film, call an Authorized Service Provider of Kodak products.

Clearing Film Jams from Area 6

The sorter is Area 6. If film jams in this area, an error message appears on the local panel.



Sorter Knob

When the Film Jam in Area 6: error message appears:

1. Touch the **Show Jam** button. The **Door Control** screen appears and the affected area is highlighted.
2. Open the hood to its first locking position.

CAUTION:

Hot surface. Drum and rollers inside the processor are hot. Exercise caution when working in the drum area.

3. Inspect the sorter rollers on the left side of the sorter. Remove any film. If the film is jammed in one of the feed roller sets, turn the sorter knob in the appropriate direction to free the film.
4. To access the inside area of the sorter:
   a. Press down on the release latch.
   b. Carefully tilt the sorter to the left until it is in a resting position.
5. Remove any film. If the film is jammed in one of the feed roller sets, turn the sorter knob in the appropriate direction to free the film.
6. Carefully tilt the sorter back to its locked position.
7. Close the hood.
8. If you cannot clear the jammed film, call an Authorized Service Provider of Kodak products.

Calling for Support

If you cannot repair the machine and need help, you should call for support. Before you call, have the following information available:

- Model number: 8900
- K-number: (see front of the laser imager above the Kodak logo)
- Phone Support number: 1-800-328-2910 (U.S. only)

5 Specifications

Dimensions

Height:	152 cm (60 in.)
Width:	81 cm (32 in.)
Depth:	86 cm (34 in.)
Weight:	466 kg (1028 lb.)

Electrical

Voltage:	100 V ±10%, 50/60 Hz ±3 Hz
	120 V ±10%, 50/60 Hz ±3 Hz
	200 V ±10%, 50/60 Hz ±3 Hz
	220 V ±10%, 50/60 Hz ±3 Hz
	240 V ±10%, 50/60 Hz ±3 Hz
Current Draw:	100 V: less than 15 A
	120 V: less than 12 A
	200 V: less than 7 A
	220 V: less than 7 A
	240 V: less than 7 A
Power Consumption:	1530 W (maximum)

Laser Specifications

Wavelength:	810 nm
Power:	100 mW
Radiation class:	3B
Type	Diode

Operating Environment

Temperature:	15° to 35°C (59° to 95°F)
Humidity:	20% to 75% RH, non condensing
Airflow	0.5 cubic feet per minute of fresh outside air, per square foot of floor area, assuming a maximum occupancy of 10 persons per1000 square feet in the room where the laser imager is located.
Magnetic Field:	< 50 Gauss

Storage Environment

Temperature:	-35° to 60°C (-31°F to 140°F)
Humidity:	10% to 90% RH, non condensing

Environmental Effects

Heat Dissipation:	3000 BTU/hour (average)
Acoustical Noise:	Less than 54 dB at one meter (70 dB momentary)
	Less than 80 dB, non-repetitive tasks such as door open/close

Film Sizes

The 8900 Laser Imager processes the following film sizes:

- 20 x 25 cm (8 x 10 in.) *DryView* Laser Imaging Film
- 20 x 25 cm (8 x 10 in.) *DryView* Mammography Laser Imaging Film
- 25 x 30 cm (10 x 12 in.) *DryView* Laser Imaging Film
- 25 x 30 cm (10 x 12 in.) *DryView* Mammography Laser Imaging Film
- 28 x 35 cm (11 x 14 in.) *DryView* Laser Imaging Film
- 35 x 35 cm (14 x 14 in.) *DryView* Laser Imaging Film
- 35 x 43 cm (14 x 17 in.) *DryView* Laser Imaging Film

Film Types

The 8900 Laser Imager processes the following film types:

- *DryView* Blue Film
- *DryView* Blue Plus Film
- *DryView* Blue Plus Premium Film
- *DryView* Clear Film
- *DryView* Mammography Film

Film Throughput

Prints up to 220 films per hour.

Agency Compliance

See "Safety and Related Information" on page 1-1 in this manual.

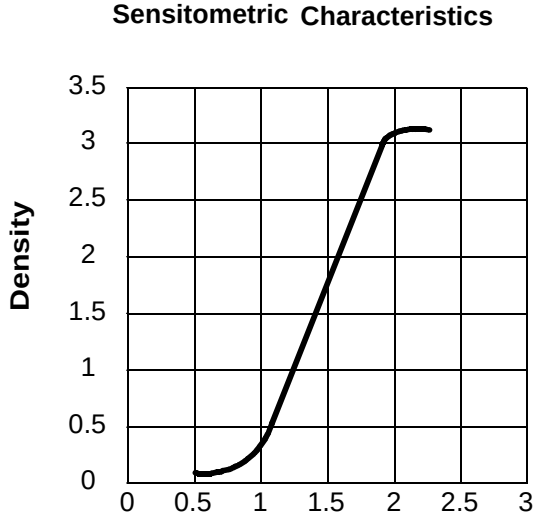
6 Film Technical Information

General Description

This section describes the characteristics of *Kodak DryView* Laser Imaging Film, not the operation of the 8900 laser imager. *DryView* Laser Imaging Film is a high-resolution, infrared-sensitive, photothermographic film designed specifically for the family of *DryView* Laser Imagers. *DryView* Laser Imaging Film is packaged in daylight load packages, and available in blue or clear, 7-mil polyester base.

Spectral Sensitivity

DryView Laser Imaging Film is infrared sensitive and has been sensitized to the infrared laser diode of *DryView* Laser Imagers. When handled according to instructions on the daylight-load film package, safelights are not needed. If you remove undeveloped film from the daylight load package, you will need a darkroom setting and a green safelight.



Relative Log Exposure (Example)

Image Quality

DryView Laser Imaging Film delivers diagnostic-quality, continuous-tone images along with sharp alphanumerics and optimum contrast. This high-quality, silver-based film provides radiologists with the same diagnostic information they are accustomed to viewing - including the spatial resolution, contrast and grey levels. Because it is a totally dry imaging process, there is no image quality variability due to "wet" chemistry.

Automatic Image Quality Control

DryView Laser Imaging Film is system-matched for the Kodak patented Automatic Image Quality Control (AIQC) technology. This fully automated system, which is a standard feature of *DryView* Laser Imagers, is designed to ensure that image quality parameters meet preset user preferences, film-to-film, lot-to-lot.

Environmental Impact

Tests show that *DryView* Laser Imaging Film is not considered hazardous to the environment. As a result, you can develop, recycle, and dispose of film with less impact on the environment than if you were using wet-developed silver halide films.

***DryView* Laser Imaging Film** **US Environmental Regulations Comparison**					
	Wet Silver Halide				***DryView***
	Developer	Fixer	Wash	Film	Film
Product Regulations					
OSHA MSDS	Required	Required	Not required	Not required	Provided
DOT	Hazardous	Hazardous	No limits	No limits	No limits
Use permits	Local	Local	None	None	None
Disposal* Regulations					
EPA	Hazardous	Hazardous	No	No	No
DOT	Hazardous	Hazardous	No	No	No
Note: There is no SUPERFUND liability with *DryView* Laser Imaging Film. * State and local laws vary. Consult appropriate regulations or authorities prior to disposal.					

Storing and Handling Undeveloped Film

To achieve consistent results up to the expiration date indicated on the film package, *DryView* Laser Imaging Film must be stored in a cool, dry place (41° to 77°F / 5° to 25°C) and protected from radiation and chemistry fumes.

The film can withstand short-term temperature spikes (up to 95°F/35°C) for several hours during transit without any significant effect on film quality or performance. Transit temperatures above 95°F/35°C will gradually diminish shelf life. If the AIQC encounters film that has been damaged by improper handling, the AIQC will automatically alert system operators.

Handling Developed Film

Handling *DryView* Laser Imaging Film requires reasonable care. Spills, humidity and other moisture typically have no significant effect on developed films. However, prolonged exposure to intense light or excessive heat (130°F/54.4°C) for more than 3 hours, may cause some gradual

darkening of images. Leaving films in vehicles in hot climates for extended periods of time is not recommended.

For best results, store film in sleeves when not being reviewed. *DryView* Laser Imaging Film can be left on a light box for more than 24 hours; in extreme cases in which light boxes are exceptionally hot (120° F/49°C), Kodak recommends removing them prior to 8 hours of continuous exposure.

Take care when using spotlight viewing for more than 30 seconds because temperatures near the light source may exceed 180° F/82.2°C. Use in slide projectors is not recommended due to the high temperatures generally found in these devices.

With *DryView* technology, a small amount of final development occurs when the film exits the laser imager and is initially exposed to ambient or view-box lighting. This is virtually undetectable and has no effect on image quality (i.e., typically 0.02 change in density). This small density increase is uniform and permanent upon full exposure of the film under normal handling conditions (i.e., room light or view box).

Archiving Developed Film

DryView Laser Imaging Film has been tested and can be archived for more than 100 years when stored at American National Standards Institute (ANSI) recommended storage conditions (77°F/25°C). Developed films may be stored at higher temperatures; however, that may reduce the number of years the film can be stored. For example, storing films at a constant elevated temperature of 90°F/32.2°C may reduce archive capability to 30 years.

Exposing to Moisture

DryView Laser Imaging Films typically withstand humidity, spills and other forms of water without any significant effect on image quality or film integrity. If needed, film can be cleaned with a clean, damp cloth.

Dissipating Odor

DryView technology eliminates virtually all unpleasant odors. While some low-level odors are produced during the development process, they pose no known adverse health risks. Processing odor levels are further reduced by a non-hazardous, recyclable filter in the laser imager. This filter traps most low-level odors and prevents them from dissipating into the work environment. To help maintain optimum performance, the filter requires periodic replacement. *DryView* Laser Imagers require no special venting.

Dissipating Heat

DryView Laser Imagers use controlled heat to develop *DryView* Laser Imaging Film. The heat has virtually no effect on the air temperature of the work area. The amount of heat dissipated into an area during a day is typically less than the heat generated by four 100-watt light bulbs.

Recycling Film

According to the Environmental Protection Agency (EPA) standards, *DryView* Laser Imaging Film is not considered hazardous and requires no special disposal procedures. However, the film does contain silver and polyester that may be recovered by using one of several recycling processes.

Call your local Kodak sales representative or go to the Kodak website www.kodak.com/go/KES

Refer to Publication J700 and see “End of Life Management' section.

Appendix A: Quality Control Procedures

Compliance Guide - Quality Control for Laser Imagers Used in Digital Mammography Systems

These Quality Control Procedures are intended to provide guidance for mammography facilities and their personnel. They represent the equipment manufacturer's views on the appropriate procedures for conducting Quality Control tests for digital mammography and observing the Mammography Quality Standards Act (MQSA). The following procedures represent acceptable ways of doing the tests, but unlike regulations, they are not binding. Alternate procedures may be used if they satisfy the requirements of the applicable statute, regulations or both. It is the responsibility of the mammography facility to read, understand and follow the regulations.

Under its own authority, a state may impose requirements more stringent than those imposed in the FDA Mammography Quality Standards Act. A facility should check with state or local authorities regarding their requirements.

Automatic Image Quality Control and the QC Process

The *Kodak DryView* 8900 Laser Imager has a built-in Automatic Image Quality Control (AIQC) system that automatically compensates for film lot variations, ensuring consistent print densities. The MQSA requires that the mammography facility establish a quality control (QC) process that verifies the effectiveness of the AIQC system. Kodak's recommendations below are based on the MQSA and the QC process described in the Radiologic Technologist's Section of the Mammography Quality Control Manual, 1999, published by the American College of Radiology. This QC process has been adapted to apply to the special features of *Kodak DryView* Mammography Laser Imaging Film and the characteristics of the 8900 Laser Imager. The procedures that follow assume that the user has been trained in operation of the 8900 Laser Imager.

Running a QC Baseline Test

Per the MQSA, a baseline test must be run when the 8900 is first installed and must be repeated every time a box of film with a different emulsion number is used. This test sets up a baseline set of film parameter values that shall be used as a standard for comparison in daily quality control tests. Kodak recommends the procedure described below as a means of complying with this regulation.

Procedure for the Installing Field Engineer

The installing field engineer verifies that the 8900 meets its performance specifications, runs the baseline test described below, and prints a clinical image of the site's choice. The site's responsible healthcare professional is asked to approve that the 8900 produces an acceptable clinical image. If the image is not acceptable, the field engineer repeats his procedures until the settings for the baseline print produce acceptable clinical images.

Procedure for the QC Technologist

After an acceptable installation, the user facility's technologist must repeat the baseline test whenever a change occurs in film lot number.

NOTE: The following is an example of a film lot number: 020662-0211-A-019. The film emulsion number is underlined.

Baseline Test

1. Apply power to the 8900 and allow it to warm to READY, as indicated on the local panel. Request a Calibration Test Print (see "Requesting a Calibration Test Print" on page 3-19) to put its Automatic Image Quality Control (AIQC) system in control.
2. Print two QC Step Wedge test films (see "Requesting a QC Step Wedge" on page 3-20). See the figure on the next page for a sample step wedge.
3. Using a densitometer, read and record the density of each step (1 through 21) on each of the two test films. (For consistency from film to film, always read density at the center of each wedge.) The QC Step Wedge is positioned on the film to allow for the use of an automatic densitometer such as the *X-Rite* Model 391 Densitometer for automatic density recordings.

NOTE: You can choose to use a clear area on the test films instead of the actual step 1 to take the "step 1" density reading.

4. Determine and record the average of the two densities read for each step.
5. Select from the average values calculated from the 21 steps to

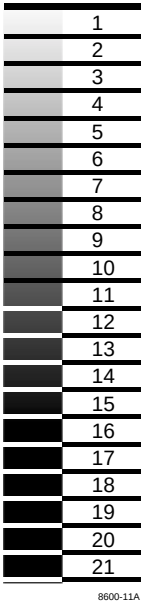
determine the film parameter values as follows:

a. Determine which step has a density closest to 2.20. Then determine which step has a density closest to but not less than 0.45. Designate the difference between these densities as Density Difference (DD).

b. Determine which step has an average density closest to but not less than 1.20. Designate this step as Medium Density (MD).

c. Designate the average for Step 1 (or the clear area on the film) as Base Plus Fog.

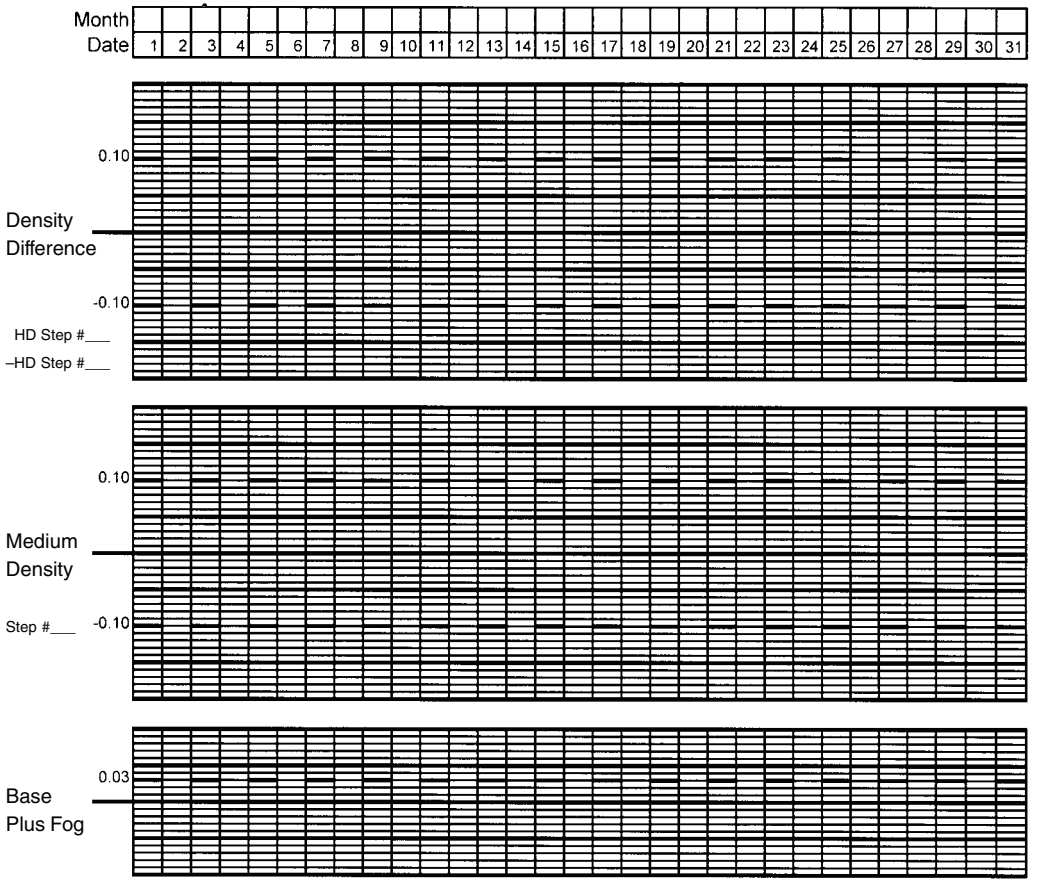
d. Record the numeric values of DD, MD and Base Plus Fog on the center lines of the laser imager QC Chart. See the Quality Control Chart on the next page. Record also the step numbers involved.



QC Step Wedge

LASER IMAGER QUALITY CONTROL CHART

Imager Serial:_____ Emulsion: _____ Month:_____ Year:_____



Remarks	Date	Action

Quality Control Chart

Running a Daily QC Test

The MQSA requires that a sensitometric test be run daily and that clinical images be made only when the control chart is within the control ranges. Kodak recommends the following laser imager test. Perform this test daily before clinical mammograms are performed, to ensure quality output. Plot the values obtained from the test on the chart for comparison with the film parameter values established in the baseline test.

1. Apply power to the 8900 and allow it to warm to READY, as indicated on the local panel. Request a Calibration Test Print (see "Requesting a Calibration Test Print" on page 3-19) to put the Automatic Image Quality Control (AIQC) system in control.
2. Print a QC Step Wedge film per the procedure on page 3-20 of this User Guide.
3. Use a densitometer to read the designated steps on the test film. Read at the center of each step. If a clear area on the film was used instead of step 1 in the baseline tests (see "Baseline Test" on page A-2), use a clear area in this QC test.
4. Record the date on the chart. Then plot the DD, MD, and Base Plus Fog values in the appropriate column on the chart.
5. Determine if any of the values exceeds the control limits for the parameter.

NOTE: The numbers above and below the center lines on the chart indicate the control limits. For example, for DD or MD, 0.10 above or below the center line is approaching the limit, but is acceptable. However, 0.15 above or below the line is not acceptable.

6. If the values did not exceed a control limit, examine the chart and see if there is a trend that suggests possible future problems. (This could be, for example, three or more data points for DD, MD or Base Plus Fog in succession moving upward or downward.) If the data points have not exceeded the limits, clinical mammograms can continue to be run.
7. If any value exceeds a control limit, DO NOT run clinical mammograms until the problem is corrected. Proceed as follows:
   a. Circle the out of control point(s) on the chart.
   b. Correct the problem. The fault could be in the film, imager or densitometer, or in the performance of the QC procedure.

c. Note the cause of the problem in the "Remarks" section of the chart.

d. Repeat the step wedge test and graph the parameters on the chart.

Appendix B: Warranty and Limitation of Liability

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Glossary

AIQC	Automatic Image Quality Control.
CR	Computed Radiography, the process of creating digital radiographic images.
CT	Computed Tomography, the process of creating digital tomographic images.
Cycle power	Cycle power means to shut down and power up the laser imager.
DICOM	Digital Imaging and Communications in Medicine. A TCP/IP-based protocol for transmitting and receiving medical imaging and related data over a network.
Dmax	Dmax means maximum density. Dmax is the density of an area on the film that has received maximum exposure.
Dmin	Dmin means minimum density. Dmin is the density of an unexposed area on the film.
dPatch	dPatch means density patch. This is a small patch of specified density in the trailing edge of each film that AIQC uses to monitor density change on film. The dPatch is only available as an option on 35 x 43 cm (14 x 17 in.) film.
DR	Digital radiography, the process of creating digital radiographic images.
DRE	DICOM rastor engine.
DSA	Digital Subtraction Angiography.
FAZ	Fatty acids (FAZ). A by-product from the processing of *DryView* Film. As film is processed (heated), solvents in the film emulsion are let go as a gas. Some of these gases condense into FAZ.
GSM	Gray Scale Manager.
Film model	The film model defines the print characteristics for a particular lot of film.
Key operator	The person(s) designated by the department manager to receive applications training and allowed access to password-protected areas to make system changes.
LED	Light Emitting Diode.
MCS	Machine Control System. A microprocessor system on a printed circuit board that runs code to control the subsystems with the laser imager.
Modality	Medical equipment that actually generates medical images (for example, an MRI).

Monotonic	Continuously increasing. When a calibration sheet, which consists of strips of increasing density (Dmin) to maximum density (Dmax), is read by the densitometer, the density values must be monotonic (continuously increasing). If they are not, an error message is generated.
MR	Magnetic Resonance.
N/A	Not available or not applicable
PACS Link (MIM)	Picture Archiving Communication System Link - Medical Image Manager. A family of store-and-forward software applications that is developed by Kodak.
Platen	The metal surface on which the film rests as it is exposed.
QC step wedge	Mammography Quality Control Test Pattern.
RF Tag	Radio frequency tag.
Service image	An image used by service personnel for troubleshooting.
Shutdown	The process of exiting current tasks and applications and turning the power off.
SMPTE test pattern	A Society of Motion Picture and Television Engineering monitor test pattern that is used for analyzing image-quality problems.
SST	Synergy Service Tool.
Test type	The type of test film that will be printed. Two film test types are available: a density test film (SMPTE pattern) and a calibration film.
TFT	Transfer Function Tables.
Undelivered queue	The queue of jobs that cannot be printed because of problems with the job description.
Version	A different rendition of an image. A second version of an image is processed using a second set of image processing parameters.

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